

American FORESTS

The Magazine of Forests, Soil, Water, Wildlife, and Outdoor Recreation
OCTOBER 1961

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American FORESTS

The American Forestry Association, publishers of American Forests, is a national organization—Independent and non-political in character—for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

James B. Craig
EDITOR

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EDITORIAL ASSISTANT

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ART DIRECTOR

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COVER

The fall season anywhere is colorful and reminds us that it is time to take the annual family ride out into the country to view nature's exhilarating change of garb. As people do everywhere, the folks in New Mexico enjoy the fall, but they have a particular way of doing it which they call "aspencading." Car parties or "aspencades" are formed and families drive together into the country for a day of nature appreciation, and we suspect, picnicking. This picture of a road leading to Canjilon in Rio Arriba County was taken by Caplin and comes to us courtesy of the New Mexico Department of Development.

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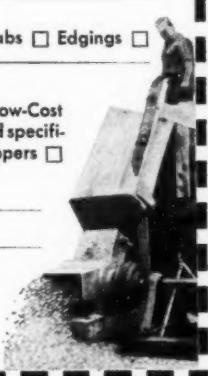
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Forest Forum

Comment from Stockholm

(The recent interesting series of articles by Mr. Hedlund, the editor of *Skogen*, as translated by Mr. Marsh, raised two questions in the mind of *American Forests*. Accordingly, we queried him in Stockholm on: 1) the statement that Finland today boasts an establishment that is larger than Longview (we had always supposed Longview was the largest mill on earth); and 2) just what the Swedish foresters meant when they raised questions about our method of cutting the large trees on stands in preparing for regeneration. Our letter caught Mr. Hedlund on the wing en route to Germany but late in August he dispatched the following reply:)

EDITOR:

As I said in my letter I will try to answer both the questions in your letter of August 4.

1. The big mill in Finland is only for pulp-making. They produce 600,000 tons a year. While—as they told us—Longview is producing 400,000 tons I thought I had reason to say that the Finland mill is the biggest one in the world. But I know that the plants of Weyerhaeuser in Longview with saws and pulp-mills and plywood factories together are the biggest concentrated wood-industry in the world.

2. Having spent a very short time in your forests I admit that it is not polite to write critical thoughts of your factory. But as for the described method of taking only the biggest trees in a stand we in Sweden have had very bad experiences with such forestry. On the biggest part of the grounds it is necessary to make clear-cuttings and to get regeneration either through planting or natural sawing from seed trees. The selection-cutting is now as a ghost for the forest people in Sweden. Clear-cutting and regeneration through the mentioned methods is the only way to get higher production and to get sustained cutting yearly in the future.

I hope that this will be enough in order to explain what I mean.

Hans Hedlund

Kilmer Oak

EDITOR:

We have need of extra copies of *American Forests* for display use in connection with the article on Joyce Kilmer and the Kilmer Oak at Rutgers University. Our students study Kilmer while they are working on a Unit on American Authors. The extra copies will be used by 23 sections of seventh and eighth grade English classes in our school and also at the new junior high school.

Mrs. W. H. Steelman
Study Hall Supervisor
Woodrow Wilson Junior High School
Pine Bluff, Arkansas

EDITOR:

We need more copies of the short article "In Jeopardy: Kilmer Oak" which appeared in the August issue of your fine

magazine. The Kilmer Oak is receiving a good deal of publicity and we have had letters from all over the country and even from Europe. The photograph of the Kilmer Oak in your issue was taken in 1951 and fortunately at the maximum development of the tree. It has declined considerably since with the death of many of the upper branches.

Richard F. West
Head, Forestry Department
College of Agriculture
Rutgers University
New Brunswick, N. J.

"Mr. Travel"

EDITOR:

... Voit Gilmore has a real opportunity to make a name for himself as "Mr. Travel." (The World Is His Workshop in the August issue.) He looks like a promoter and I like his business-like approach to his job. I for one certainly do not see why England and other countries should continue walking off with the whole travel melon and this Gilmore may be just the man to help Uncle Sam get his fair share. More power to him and he certainly gave the AFA Trail Rider program a wonderful boost. If Trail Riding caught on with foreign visitors it could be a wonderful thing for The American Forestry Association and for America.

Robert Bentley
Garden City, N. Y.

EDITOR:

... a very splendid article.

Luther H. Hodges
The Secretary of Commerce
Washington 25, D. C.

Speak to the Earth

MR. BUSH:

It was a pleasure to read your comment touched off by *Speak to the Earth*—a point of view all too seldom seen in print. I'm ramming it down the throats of my friends, both those who sleep till noon on Sundays and those who are on the mad dash to save the Allagash.

While I personally savor a week in a canoe or back-packing trek, I agree that most of non-technical nature literature is unbelievably boring and therefore indefensible.

Allison Kallman
LIFE
Time and Life Bldg.
Rockefeller Center
New York 20, N. Y.

EDITOR:

In regard to Monroe Bush's "A Naturalist's Love Song" (August issue): I was somewhat surprised at Mr. Bush's views although I have not read the book *Speak to the Earth*, by the late William Breyfogle. Evidently Mr. Bush is merely another "desk conservationist" who is more interested in the number of board feet of lumber harvested annually than in the significant benefits, both to man and to nature in general which stems from good

forest management and also from "forever wild areas." He states that: "nature writing, when it is not primarily scholarly and scientific is almost without exception superficial." I hope that this is not the attitude of your magazine, for if it is, it would seem that you are defeating the very purposes for which The American Forestry Association was founded.

A love of nature and an understanding of nature go hand-in-hand. A mere scientific explanation of the biological processes in nature, although educationally informative, does not and cannot reflect the beauty and true meaningfulness in nature that is.

Mr. Bush uses, in his review, a good deal of the emotionalism which he is seemingly condemning. He also becomes sidetracked on his own personal philosophy which holds no direct relevance to the subject at hand: "Human destiny is not to be fulfilled by listening to bird songs, or by slogging through some insect-infested wilderness." This statement might be clarified if Mr. Bush would define exactly what he means when he refers to "human destiny."

Mr. Bush might do well to re-read a short essay by Joseph Wood Krutch entitled "In Back of Man a World of Nature." In it he (Krutch) expresses the view that an unhappy generation living in an artificial environment should learn to love and appreciate nature for a happier and more purposeful life. Would Mr. Bush discredit Thoreau merely because he was primarily a lover of nature and not a scientist? Who knows how many persons first became interested in the sound management of forests and related resources because of the writings of the "nature-lovers"? And of those who became "nature-lovers" as the result of this literature, how much influence have they in turn had on others in arousing an interest in the beauty and meaning of nature or in awakening an interest in common-sense conservation practices?

Ronald R. Baker
43 Rapple Drive
Albany 5, New York

The Practical Side

EDITOR:

It would be most unfortunate if young Mr. Kitchin's article in the May, 1961, issue of *AMERICAN FORESTS* were to go unanswered. In many instances he is ill-informed or uninformed and much of what he says is parroting the conservationists of fifty years ago who might have had a point but no longer do so.

Early in the article he says "our rivers and streams are being greatly polluted by industries and factories each month." The greatest source of pollution in the United States is from municipalities rather than from industries although they contribute to it to a substantially less degree.

Further along he says in allusion to forests, "they are being destroyed by forest fires, used up by lumber companies." The majority of forest fires are caused by people throwing cigarettes away, and this means

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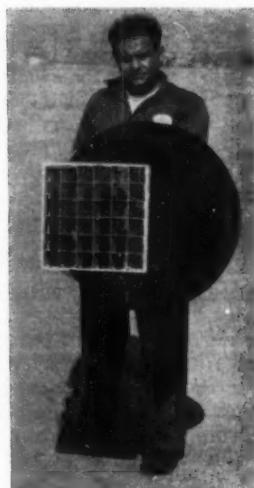
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Public Backing for Wilderness Bill Is Shown in Landslide Senate Vote

THE Senate passed the Wilderness Bill on Sept. 6 after turning back successive attempts to refer it to the Senate Agriculture and Forestry Committee and to amend it on the floor. The vote (78 to 8) was decisive and indicates much public support for the measure. Previous estimates that the bill faces a bitter fight in the House are now being revised in Washington. In the absence of Senator Clinton P. Anderson, of New Mexico, Senator Frank Church, of Idaho, served as floor manager for the bill in the Senate.

The bill sets up a wilderness preservation system of nearly seven million acres and permits the addition of eight million or more additional acres, piece by piece, by Executive action unless the Senate or House vetoes the additions. The wilderness areas, all which are already in existence, will remain largely inaccessible except by horseback or foot travel. A minimum of prospecting will be permitted but no exploitation for minerals except by Act of Congress. The bill is the most stringent non-commercial use measure ever enacted by the Senate. It has the support of the Administration.

Actually, the outcome in the Senate became apparent the previous day when the body defeated by a vote of 41 to 32 a proposal by Senator Ellender, of Louisiana, to refer the bill to the Agriculture and Forestry Committee. (For the past five years the bill has been in the Interior and Insular Affairs Committee.) Presumably the effect to recommit the bill to a new committee would have been to study it from the standpoint of the effect of wilderness on forestry. But obviously proponents thought there had been quite enough study already with Mrs. Neuberger, of Oregon, calling for an end of what she termed "stalling" tactics.

The following day, Senator Humphrey, of Minnesota, called for an all-out effort by foresters to promote sustained yield on their production forests, stating, "If ever the American people come to the borders of our wilderness areas with a need for timber that cannot be met elsewhere, then our wilderness areas will be doomed."

This statement in the legislative record placed the foresters on notice that the legislative branch expects them to increase their efforts to make all state and private commercial forest land fully productive and places the wilderness areas "off limits" for commercial forestry for all time. That legislative proposals will be introduced momentarily on just how this can be done most effectively is quite certain.

In a debate that was marked by some heat in spots, charges that economic pressures had been brought to bear on Senators were leveled by both sides. Senators Morse and Church were two of these. The former said that special interests had warned him that he is up for re-election. The latter reported that he was advised he was "digging his own political grave." Both supported the bill without reservation.

The Senate action marks a big victory for conservationist groups headed by Dr. Howard Zahniser and the Wilderness Society in the East and David Brower and the Sierra Club in the West. By the same token, western timber, grazing, and mining interests say the Senate's action is a major defeat for them. Representatives of these groups see the bill as tying the hands of the western economy as regards wilderness areas for all time to come with the exception of limited recreational use. Water, on the other hand, gained one concession. An Allott amendment gives the Federal Power Commission preferential rights in wilderness areas.

The American Forestry Association vigorously opposed the original wilderness bill and particularly a proposal to establish a Wilderness Council that the association believed would have superimposed another layer of authority on that of existing agencies. More recently it had urged that the bill be shelved until after the report of the Outdoor Recreation Resources Review Commission. This proposal was considered not germane by the Senate.

men, women and children enjoying recreation as well as those who are merely driving along our highways. Could this then mean the more people who use our forests, the more forest fires? As to his allusion to lumber companies, which I assume also includes pulp and paper companies, a selective cutting and planting of new trees has been a practice by the fourth largest industry in the United States for many years.

Economic use of national forests is a necessity as well as a practical thing. If trees are allowed to grow old and die and fall down, or fall down after they have had their life destroyed by insect pests, impassable thickets are the result. A good example is Baxter State Park in the Mt. Khatadin area of the state of Maine.

Mr. Kitchin also seems to think that recreation is the all-important thing in the United States. In order to enjoy recreation, people must have a job in the first place and to destroy industry which gives these people jobs does not make sense. Large industries may be able to support an anti-pollution program, but a small mill does not have the economic means nor the profits under the present confiscatory federal tax system to support such a program. This does not mean that I approve of pollution per se, but only wish to indicate that some economic justification has to be found to keep the tens of thousands of small industries, which contribute in a small measure to this problem in operation.

Mr. Kitchin, like many recreation addicts, is an idealist and forgets the practical side of life.

In conclusion, if he were to travel across the United States, he would find that the majority of private lands whether owned by farmers, pulp and paper companies, or private landholders are kept and sustained in a better condition than the lands that are under the jurisdiction of the Great White Father in Washington. Our forests have not only recreational value but have an economic value for the well-being of the country as a whole and its citizens. Recreationists should seek to get the federal government to put its forest land areas in order both from a recreational as well as an economic point of view before they seek to attack private industry or private forest owners which are in the main managed on a substantially higher level for the public good.

Eugene H. Clapp
President
Penobscot Chemical Fibre Co.
Boston 10, Mass.

Equal Status Demanded

EDITOR:

Reference is made to the August 1961 issue of your magazine and more particular the column "Washington Lookout" which contained Chief Forester Pomeroy's statement in behalf of The American Forestry Association in opposition to H.R. 5712.

I believe that the attached copy of an editorial entitled, "Harmonious but Separate" which appeared in the August 22, 1961, issue of the *St. Louis Post-Dispatch* (see page 52) treats the subject matter of preserving the Current-Eleven Point Rivers in Missouri as free-flowing streams much more intelligently than Mr. Pomeroy's statement before the House Committee on Interior and Insular Affairs as reported in your magazine.

The proposed Ozark Rivers National Monument has a land area of 113,000 acres of which approximately 4,000 acres is

(Turn to page 52)



On Weyerhaeuser tree farms, old-growth timber is harvested in controlled volume and promptly replaced. The goal is to establish new forests of balanced timber age classes that will sustain annual harvests forever.

Planned forests replace wild trees on Weyerhaeuser lands...

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The plan is a concept known as sustained yield forestry. It demands that our annual harvests of old-growth be restricted now to a volume approximately equal to the amount of new wood we grow each year. This will insure a relatively uniform supply of raw material until a perpetual cutting cycle of new timber crops is established.

Ultimately our forests will consist of second-growth trees in all age classes. Each year a new crop will reach usable size, sustaining an endless cycle of harvest and reforestation. Kept busy at its natural task of growing trees, the land will provide wood, water, wildlife, recreation, payrolls and other benefits for centuries to come.



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Cowboys and Indians

New Mexico's cowboys and Indians will
nostalgically recapture for AFA members
the picturesque days of the old West

It's roundup time on the Ladder Ranch in southwestern New Mexico, and the cowboys in the branding corral are busy at roping, flanking, heating branding irons and imprinting the brand on the calves



Washington Lookout



By ALBERT G. HALL

A LAND AND WATER POLICY COMMITTEE WITHIN

the Department of Agriculture has been established by Secretary Orville L. Freeman. Purpose is to promote and guide studies of production potentials and requirements for land, forest, and water resources. Chairman of the policy committee is George A. Selke, assistant to Secretary Freeman. Forestry is represented by Edward Crafts, assistant chief, Forest Service; Agricultural Conservation and Stabilization Service by Carl Larson; Soil Conservation Service by Gladwin Young. The committee will also recommend long-range goals and policy for natural resources and advise the Secretary on legislative proposals and interdepartmental affairs.

SMALL WATERSHED PROJECTS ARE RECEIVING

more attention during the present Administration than during the previous one. In May, 20 projects were transmitted to Congress for approval. An additional 19 projects were cleared by the Department of Agriculture last month. These 19 will involve more than 1.5 million acres. Estimated cost is \$45 million of which the federal share will be \$27 million. The Watershed Protection and Flood Prevention Act has been amended, by Public Law 87-170, to permit sponsorship of projects by non-profit irrigation and reservoir companies and water users' associations.

FEDERAL ACQUISITION OF WETLANDS AND OTHER
essential waterfowl habitat has been approved by both House and Senate. Each body, however, has its own idea on the extent of the program. The House approved \$150 million in acquisition funds over a 10-year period, the money to come from Treasury loans to be repaid without interest from 75 per cent of Duck Stamp receipts. The Senate has authorized \$50 million over a 5-year period to be repaid from 90 per cent of Duck Stamp receipts. The Senate version also requires consent of states involved before lands can be acquired under the act. It is expected that the latter requirement will be retained in the conference report, but that the

financial arrangements will be compromised.

SHORELINE STUDIES AND STATE AID FOR SHORE-

line development has been approved by the Senate. The bill, S. 543, provides authorization of \$400,000 for a study of specific areas by the Department of the Interior, \$400,000 for a study of national forest areas bordering lakes and streams, and \$25 million in federal funds to assist the states in establishing public shoreline areas under criteria and planning to be controlled by the federal government. The specific areas to be studied by the Department of the Interior are: Cumberland Island, Georgia; Huron Mountains, Michigan; Channel Islands, California; Fire Island, New York; Cape Flattery, Washington; Leadbetter Point, Washington; Mosquito Lagoon, Florida; Pigeon Point, Minnesota; Popham-Saint John, Maine; Parramore Island, Virginia; Great Salt Lake, Utah; Lake Tahoe, Nevada-California; Smith Island, North Carolina; and the Shores of Hawaii.

WHAT IS A NATIONAL SEASHORE? IN REPORTING

favorably on the proposed Point Reyes National Seashore in California, the Senate Committee on Interior and Insular Affairs gives the following definition: "A national seashore is distinguished from a national park primarily in its method of development and management, which may be somewhat less restrictive than in a national park. The national parks are spacious land areas which have suffered little or no alteration by man, and require exacting application of protective controls to conserve, unimpaired, their compelling manifestations of nature. A national seashore, although it may offer certain unique or outstanding natural history elements requiring absolute preservation just as in a national park, generally will be capable of sustaining as a major objective a varied public recreation program less restrictive than would be suitable in a national park. Both types of areas are administered under the laws, rules, and regulations

(Text continued on page 84)

WASHINGTON LOOKOUT (continued)

FORESTRY IN FEDERAL APPROPRIATIONS

(Fiscal Year Ending June 30, 1962)

	1961 Estimated	1962 Budget
U. S. FOREST SERVICE		
Forest Protection and Utilization		
Timber sales administration and management	\$ 21,595,000	\$ 22,780,000
Reforestation and stand improvement	4,451,000	12,750,000
Recreation and public use	15,180,000	20,500,000
Wildlife habitat management	1,718,000	3,220,000
Range management	3,859,000	4,610,000
Range revegetation	1,911,000	2,540,000
Range improvements	2,388,000	3,180,000
Soil and water management	2,151,000	4,090,000
Mineral claims, leases, etc.	5,181,000	6,800,000
Protection—fire	16,051,000	20,390,000
Structural improvements	9,802,000	12,140,000
Rehabilitation of burns	1,050,000	1,050,000
Fighting Forest Fires	5,000,000 ^a	5,000,000
Insect and Disease Control	7,251,800	9,350,000
Acquisition		
Weeks Act	100,000	300,000
Klamath Reservation ^b ^b
Superior National Forest	750,000	250,000
Special Acts	10,000	10,000
Research		
Forest and range management	8,737,000	9,737,000
Fire control	1,029,000	1,349,000
Insect	1,165,000	1,590,000
Disease	980,000	1,405,000
Forest products	3,527,000	4,477,000
Forest survey	1,583,000	1,583,000
Economic	682,000	1,032,000
Construction, research facilities	1,075,000	1,195,000
Roads and Trails—construction and maintenance	30,000,000	35,000,000 ^c
Access Roads—purchase	1,000,000	2,000,000
Indefinite Appropriations	(43,708,000)	(36,708,000) ^d
State and Private Forestry		
Forest fire control	10,120,500	12,465,500
Tree planting	296,000	296,000
Forest management and processing	1,554,000	2,500,000
General forestry assistance	438,300	538,500
Assistance, States Tree Planting ^e	1,000,000
TOTAL U. S. FOREST SERVICE	\$160,636,500	\$209,128,000^c

DEPARTMENT OF THE INTERIOR

Bureau of Land Management:

Management of Lands and Resources (Total)	(\$ 28,371,000)	(\$32,500,000)
Forestry	6,035,000	7,181,000
Soil and moisture conservation	5,218,000	5,179,000
Fire suppression	400,000	400,000
General administration	1,651,000	1,751,000
Cadastral surveys	2,902,000	3,732,000
Other	12,165,000	14,257,000
O & C Lands (Total)	(11,752,000)	(9,200,000)
Construction and acquisition—roads	10,830,000	7,850,000
Reforestation and improvements	672,000	1,050,000
Operation and maintenance (roads)	250,000	300,000
Other access roads; buildings; recreation	663,000	850,000 ^f
Range improvements	863,000	917,000 ^f

TOTAL BUREAU OF LAND MANAGEMENT*Bureau of Indian Affairs (Forestry and related items only):*

Forest and range management	\$ 1,940,000	\$ 2,190,500
Fire suppression	140,000	140,000

National Park Service (Forestry and related items only):

Forestry and fire control	\$ 1,033,000	\$ 1,140,000
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^a A supplemental \$31,500,000 was appropriated, March 31, 1961.^b A supplemental \$68,716,691 was appropriated, March 31, 1961, for purchase of the Klamath Indian Forest Lands.^c In addition about \$10 million will be available from road and trail fund (from timber sales). Also add \$14,170,000 to 1961 figure.^d Includes school fund payments, slash disposal refunds, payments to states, etc.^e In addition, \$25,667,000 will be available by transfers from other agencies and accounts: \$1,423,400 from watershed protection program, \$2,695,200 from flood prevention program, \$16,800 from Great Plains program administered by Soil Conservation Service, \$139,300 from Agricultural Conservation Program, \$119,000 from Soil Bank program, and \$22,000,000 from trust funds, and \$1,050,000 for roads on O&C intermingled lands. Comparable total for 1961: \$24,985,000.^f Includes \$200,000 for buildings.^g From grazing receipts.



By MONROE BUSH

A Bargain Library

IN these days of our restless discontent, we are sometimes driven in the morose hours to conclude that everything pleasant is either expensive, immoral, or fattening.

I want to tell you today of a notable exception to this blue dictum. There has been published a series of inexpensive books which, dollar for dollar, offers the greatest return in creative pleasure that money can buy.

With fourteen volumes presently in the set, the entire lot can be bought for a few pennies over \$20.00—or separately for a scant \$1.45 per copy. In this instance I will gladly risk pontificating, to say that the reading of them all would be an adventure for both mind and spirit, and that the encouragement of one's children to do so would be worth a year's schooling. (And I will surely be forgiven such intemperate enthusiasm by anyone who troubles to examine these books.)

Doubleday & Company recently entered a cooperative arrangement with the American Museum of Natural History for the publication, through its paperback Anchor Books, of a "Natural History Library." The selections are made by a committee of five first-line scientists on the museum staff.

But we can let the publisher speak for himself: "The Natural History Library makes available in paperback format books of enduring interest in the life and earth sciences. Published in cooperation with the American Museum of Natural History by Doubleday Anchor Books, this series introduces the student and the general reader to the study of man—his origins, his nature, and his environment—and to the whole natural world, from submicroscopic life to the universe at large."

This statement is remarkable as a publisher's blurb for two reasons: (1) It is absolutely accurate, so far as it goes; and (2) it understates the inherent quality of the series that has been assembled. The job was done better than they say.

The first in the Library (N1) is *Horses* by George Gaylord Simpson. Originally published by Oxford in 1951, Dr. Simpson notes in succinct preface what new insights have been gained since its writing—and these certainly do not "date" his brilliant work.

From start to finish this is a study of great directness and confidence. Its premise is not timid: "From horses we may learn not only about the horse itself but also animals in general, indeed about ourselves and about life as a whole, its history and characteristics. The aim of this book is not only to present the members of the horse family, but also to present an introduction to the study of animals and of life, with horses providing concrete and excellent examples."

As in the case of every properly ambitious man, Dr. Simpson does not quite attain his goal. We actually learn very little "about ourselves and about life as a whole" from this book. Yet reading the work for what it says concerning horses, we learn a great deal indeed. And the final chapter, "Explanations of Evolution," is an incomparable statement within necessarily narrow and naturalistic lines.

One last word: the Appendices are superb. "Where to See Fossil Horses" is so useful as to be startling. Not many books offer such practical helpfulness.

John and William Bartram's America, edited by Helen Gere Cruickshank, was reviewed in this

column at the time of its publication in 1957. Appearing as the second (N2) volume of the Library, you have it available now at a fraction of its original cost. The book is so well known, at least by reputation, that no further paeaning of praises should be necessary.

Baltimorean Gilbert C. Klingel is distinguished for many things: scientist, explorer, writer, businessman. Nothing in his long, rich life gives him, however, such a stout claim to immortal memory as that one perfect book: *Inagua*, now published as *The Ocean Island* (N3).

Permit me the simple extravagance of saying that this is one of the two or three most delightful books I have read in my lifetime. It is as sensitive as Thoreau, as romantic as Slocum, as exciting as Beebe—and, hold on to your hats, as well written as Carson! The year that Mr. Klingel spent on the wild little island of Inagua will be teaching and inspiring, and vastly entertaining, men and boys five hundred years from now.

On the other hand, *White Waters and Black* by Gordon MacCreagh (N5), fighting as it does doggedly chapter by chapter through the terrible jungles to the north and south of the Upper Amazon, is a considerably stiffer dose of adventure. MacCreagh, with uncommon humor and a wise man's insight, is writing as much of human beings as of nature. His companions on this expedition take on more substance than the world that all but engulfs them. This is a basic, and true, study in depth of human nature under a particularly difficult set of strains. And the natural backdrop for this drama is as exotic as *Green Mansions*.

It is astonishing that a man can set down a book like *White Waters* (Turn to page 64)

Editorial

All For One, One For All

Establishment at Mexico City in July of a North American Forestry Commission consisting of representatives from Mexico, Canada, and the United States marks yet another forward step in bolstering the goodwill sparked at the recent World Forestry Congress. Initially, the FAO-sponsored commission will stress interchange of information and cooperation on combatting forest insect and disease menaces and forest fire prevention. Officers elected to serve at the inaugural session (who will be rotated in coming years) were: Chairman, Dr. Enrique Beltrán, Mexico; First Vice Chairman, Dr. J. D. B. Harrison, Canada; Second Vice Chairman, Dr. R. E. McArdle, U.S.A.; Rapporteur, Ing. Juan Manuel González, Mexico.

The Commission's decision to work together in coordinating insect and disease control work was taken following a talk by Dr. M. L. Prebble, of Canada, who urged establishment of working groups to facilitate biological control measures and the administration of plant protection legislation and accompanying regulations. Accordingly, the Commission invited the incoming chairman [Mr. Harrison] to organize a working group of specialists to explore fully inter-nation protection needs in future months.

J. N. Diehl, of the U. S. Forest Service, spearheaded the forest fire

discussion. He described the three chief aspects of the subject: forest fire prevention, forest fire control technology, and forest fire research. He then outlined a nine-point cooperative program touching all aspects of the problem to be carried out by a recommended Forest Fire Control Working Group. The Commission adopted the program with members urging that special attention be given to lightning-caused fires and the major importance of man-caused fires.

While fire and insect and disease control will be the big gun in the new program, the Commission also devoted attention to international trade in forest products and regional study of wood resources and requirements. Topics to be explored at future conferences include genetics, preservation of natural forest areas, forest inventory methods, forestry and wildlife, forestry and recreation, private and communal forests, and coordination of bi-lateral and multi-lateral technical aid problems.

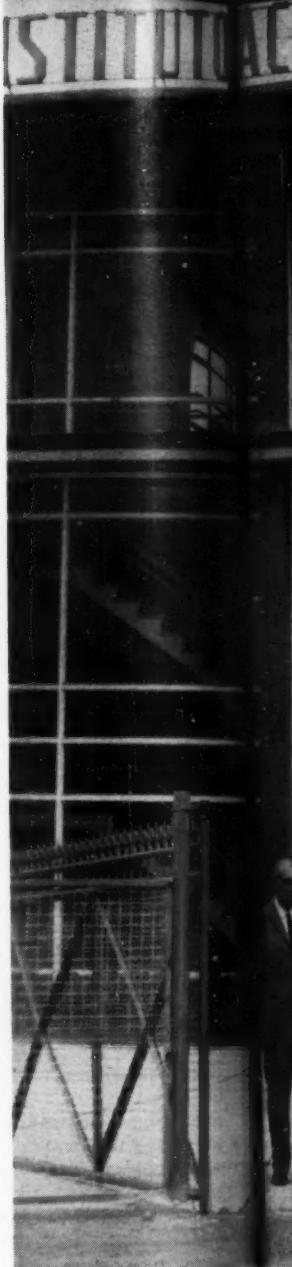
Thus the foresters of the three countries on the North American continent are endeavoring to keep the cooperative "Spirit of Seattle" alive and functioning in these troublesome times. To the participants from all three nations, AMERICAN FORESTS says, "Well Done!" and "Keep Up the Good Work!"

Participants at first meeting of FAO-North American Forestry Commission in Mexico City on July 24-29, 1961 (left to right):

Diehl, USA
Harper, USA
Huberman, FAO
Beresford-Pierse, FAO

Shanklin, USA
McArdle, USA
Ortega, Mexico
Beltrán, Mexico
Gill, USA
Best, Canada
Harrison, Can.
Villaseñor, Mexico

Prebble, Canada
Garduño, Mex.
Beall, Canada
Redmond, Can.
González, Mex.
Tortarelli, Mexico



A Matter Of Emphasis?

IT is no secret that the Administration is working on a new program aimed to increase the productivity of and otherwise aid the nation's farm and other small woodlands. This program was pledged by the victors of the recent campaign. It has since been reiterated in the President's resource messages to Congress.

So far as we know, no one outside of the Executive Branch has had a chance to study this proposed program as yet but we assume it will follow the partnership pattern of state and private cooperation as laid down by the Clarke-McNary Act. Be-

yond that, it is still anybody's guess.

Others are already assuming quite a bit more. Groups doing this can be divided into three categories. The first is composed of those forestry politicians out in the states who are telling the home folks they are opposed to any crash forestry program. These are people we have heard from before and, if they will pardon our saying so, nobody is taking them very seriously. Not so long as they continue to talk out of both sides of their mouth at once. They do this by calling for more state's rights from one side and more government

largesse of every type from the other. These people will continue to take all they can get, and what's more everyone in Washington knows it. They aren't fooling anyone.

The second category, the organized forest industry is also flatly opposing any "crash program" and contends a lot of improvements can be made in existing programs. This group shrewdly counts on plenty of support from large numbers of farmers who did not exactly support the Administration in droves in the recent election. The industry is well-organized, well-heeled, and deter-



nined. The Administration can count on opposition from this quarter if industry views aren't given careful consideration.

The third group—and this is a potent one too—consists of a number of forest-minded individuals and organized groups who candidly admit, when cornered, that they want more government help for forestry. But they are also very stubborn in contending they should have a say regarding just where the emphasis should be and what *kind* of help should be provided.

Pointing to the fact that some

farmers and other small woodland owners in the Middle Atlantic and Southern states are already having difficulty selling their wood products due to lack of markets, this group contends that research should be the big gun in any new effort and that all other forms of aid should be hooked to it. While we will need more and more tree planting in future years, the crying need right now is research to open up new markets for people already in the forestry business, this group contends. Otherwise tree growers may get discouraged and quit planting trees alto-

gether, causing timber starvation.

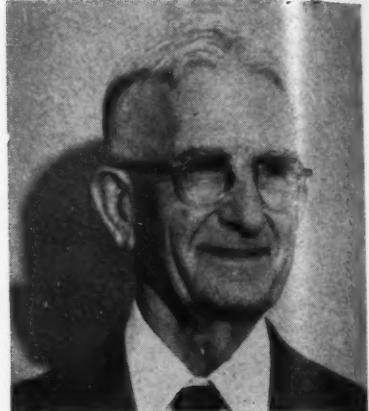
Sometimes a little matter of emphasis makes all the difference in whether a new program is a success or a flop. This emphasis on research strikes us as having real grass roots appeal. As a matter of fact, the call for it is coming from the grass roots. The Administration would be well advised to listen to it for as everyone knows partnership is a two-way street. And regardless of how much help he may receive, the farmer, being a practical man, is primarily interested in selling his wood crop today as well as in the distant future.



The Hon. Elmer L. Andersen
Governor of Minnesota



Henry T. McKnight, Chairman
Minn. Natural Resources Council



Dr. Samuel Trask Dana
American Forestry Association

Minnesota Launches Land Reform Program

MINNESOTA'S Gov. Elmer L. Andersen gave The American Forestry Association's program of state-by-state landownership studies a healthy shot in the arm when he appointed a Natural Resources Council for his state during August.

Gov. Andersen selected Henry T. McKnight, Minnesota conservationist and businessman, as chairman of the new 26-member council. McKnight, AFA director and member of the association executive committee, has been the state's leading supporter of the council idea as outlined in the recent definitive study of state land usage, *Minnesota Lands*.

Main author of the study was Dr. Samuel T. Dana, dean emeritus of the School of Natural Resources, University of Michigan.

Dr. Dana had suggested the council as "the most constructive single step that could be taken to assure intelligent, comprehensive and continuing consideration of Minnesota's land problems."

From his home in Ann Arbor, Mich., Dr. Dana congratulated the Governor on this "great constructive move" and said he is "delighted the initiative has been taken by Minnesota, putting this state in the front rank in this field."

"No other state has created an or-

ganization with the broad composition that is the distinctive feature of the Minnesota Natural Resources Council and its most important factor," Dr. Dana commented.

In a well-attended news conference called for announcement of the council, the Governor stressed that the council "follows almost to the letter the Dana prescription for an effective natural resource group."

In naming McKnight as chairman, Gov. Andersen cited McKnight's lifelong interest in the conservation of Minnesota's natural resources. "I am gratified that Mr. McKnight has accepted this responsibility and I know the work of this committee will produce many benefits for the citizens of our state."

Gov. Andersen said the council is designed to "stimulate studies and action for enlightened state policy in the field of land ownership, use and management."

"The group has three functions," he explained, making reference to passages from *Minnesota Lands*, which John H. Allison and Russell N. Cunningham helped Dr. Dana prepare. "First it should serve to identify problems and launch research studies to underscore the value of sound programs aimed at solutions. Long-range planning would result.

"Secondly, it should serve as an

advisory arm to the Governor, the Conservation Department and the next Legislature—as well as federal agencies and private groups—on natural resource policies, administration and management.

"Finally it should act to promote cooperation between the various private and governmental groups which, of good intention, might be dividing energies and wasting talents through lack of liaison and co-ordination."

McKnight's extensive background in forestry and agriculture brings high caliber leadership to the council. He is a vice president of Keep Minnesota Green, and active in the Soil Conservation Society of America. He has served on the National Agricultural Advisory Commission, and in 1957 headed the American delegation to the Conference on Agriculture in Bangkok for the Economic Cooperation for Asia and the Far East organization.

Commenting on his appointment, McKnight said, "I am delighted with the broad range of experience of the membership of the Minnesota Natural Resources Council and honored to serve with them. Meeting as a council, this group will be studying and making recommendations on the basic and important things that might be done in the field of

(Turn to page 66)

AFA's Role in Forest Land Use

By WILSON COMPTON

IN point of continuous, active operation, The American Forestry Association is the oldest citizen association for conservation in the United States. It was founded nearly eighty years ago. Its initial objectives were much the same as they are now—promotion of public information about our forests, their importance, their uses, magnitude, value, ownership, condition, and prosperity; development of a sense of citizen responsibility for the protection and preservation of the forests; encouragement of continuous forest production; and support of legislation which would promote these objectives.

In its early years, these ideas, however prophetic they may have been, were largely a "voice crying in the wilderness." There were a few who listened, but many more who merely looked the other way. There were no professional foresters in America and those who publicly advocated forest conservation measures were regarded as "quaint." Our country then was in the midst of its vast western expansion and still engaged in a battle with the forest wilderness which, at one time, enveloped nearly half of our national land area. Trees were of little value because there were so many of them. The lumberman—the "man with the axe"—was the herald of progress, the provider of low cost materials which built a nation. When The American Forestry Association was born, Michigan white pine was in its hey-day; and the country as a whole was satisfied with the myth of inexhaustibility of its timber supply.

Even as recently as a half century ago when I was working as a log scaler in a north Michigan logging camp, there was an almost complete indifference to forest fires. If the fire was in the "green timber," it might be worth while to try to put it out. But if it were merely in the "slashings," what difference did it make whether it burned or not! In 1909, the logging boss in Camp 17 of the DeWard Lumber Co. in north Michigan was a giant Finn. Fires had broken out in the nearby cut-over lands. But the big Finn said,

"We won't bother. The fire is in the slash. The wind is from the west and there are lakes to the east. Let her go!"

So the repeated fires took not only the slash and the seedlings but the duff and the humus from the soil and left the land to the mercies of wild cherry, scrub oak, and aspen, with here and there a small island of pine which survived the fires. There are still millions of such acres in north Michigan. Years ago, I bought a quarter section of such land at a tax sale for \$23.00—not \$23.00 per acre but \$23.00 for 160 acres. Today, forest owners, the

ester put it, that the "lumberman's axe is the beginning of forestry." Forest cutting must eventually lead to forest growing. But the time was not yet ripe and would not be for many years. Forestry—or "tree farming," as we know it today—had to bide its time.

Meantime, the study and administration of our vast public lands, especially in the West, opened the way to forest conservation measures of incalculable value and importance to national security as well as national economy in the creation of forest reserves now as familiar as our great system of national forests and state forests; and the gradual development, out of meager beginnings 80 years ago, of a National Forest Service which has no peer in any other country of the world. The American Forestry Association was in the forefront of these developments and has been given generous and deserved credit for a major share of these notable achievements.

The early years of this century saw the beginnings of a controversy which, for decades until recent years, divided American forestry and forest industry and threatened to make forest conservation a political issue which it should never be. Several so-called "surveys" of our total timber resources had been made. Many of them were superficial. All turned out to be erroneous. But they presented a public picture which was interpreted by many, with a deep seated conviction, as signifying that our country was faced not by a mere timber shortage but by a timber famine. Others thought that the surveys were understatements of our forest resources, that the forecasts of timber famine were exaggerated, and that a more important problem was the mounting financial pressures for the liquidation of old growth timber holdings which had forced the major forest industries into a condition of chronic over-production. As often happens, the truth lay in between these conflicting points of view.

Many of those who a half century ago foresaw national timber short-

(Turn to page 56)



Wilson Compton, AFA Board and Executive Committee member, spoke before the American Forest Products Industries Conference on Woodlands Use

state, and the nation are gradually reseeding at heavy expense millions of such acres which Nature itself would have reseeded at little expense if only the fires had been controlled as generally they are being controlled today. If loggers were to blame for lack of foresight, so was the public equally to blame.

Under such circumstances, in its earlier years the warning voice of The American Forestry Association and other conservation agencies was little audible amidst the clamor of the axe and the saw. But some of its wiser minds were confident, as an eminent German-born American for-

New Mexico's

MANY people from other parts of the country are under the mistaken impression that New Mexico is a land of arid plains and deserts. Actually, nothing could be farther from the truth. New Mexico has more than 20 million acres of forest lands, not to mention its many streams, lakes and rivers.

Unfortunately, many of these forest lands have been neglected in the past—in fact, the very notion of conservation came to The Land of Enchantment belatedly, after considerable damage had already been done. Lack of understanding as to proper conservation principles had caused great harm to the state's forests, and would have continued to do so, if it had not been for the creation of a State Forestry Department, some three and a half years ago.

New Mexico was the 45th state to create such a department—and as a result, many of our state and private lands had previously been neglected. This is a tragic situation, especially since these lands cover most of the important watersheds in our part of the country. But, in the short time our State Forestry Department has been in operation, I feel that it has done an impressive job in bringing a workable conservation program to the state. Since December 1, 1957, when the program was begun, it has grown until it carries on more activities than can be easily handled with present funds.

It should not be necessary to point out the importance of our forest lands to all of us. Maintaining a habitat for New Mexico's game and fish is one of the functions of the forests. Water production, grazing, wildlife, recreation, all depend on proper forestry. And, of course, there is the vital concern of the timber industry.

Of primary concern to New Mexicans is watershed management. We spend millions of dollars annually in developing storage capacity divergence and the utilization of water. Until now, there has actually been more work done in the acquisition

By EDWIN L. MECHEM

Governor of New Mexico

of storage and divergence of water than in watershed management.

Of vital importance, of course, in any conservation program is fire control—we must protect what we have. Secondly, a reforestation program must be carried out vigorously to build up our depleted forest lands. The areas which have been destroyed by fire and in various other ways must be replanted, which is no small job.

New Mexico faces the grave danger of losing its timber resources through fires, pests, and lack of understanding of proper management of timber areas. The program now underway to combat this danger is complicated and diversified. The Clarke-McNary Act, which, stated simply, provides for cooperation between state and federal governments in conservation, is part of the program under which New Mexico is now functioning.

We are now in the second year of our tree planting program, having transplanted 100,000 trees. The last New Mexico Legislature passed several revisions in the state law which will be most helpful to the forestry program. One of these provides for the protection of Christmas trees in the state, giving authority to check bills of sale for cut trees when necessary. Another pertains to spruce cutting under forestry direction, giving the state some control over cutting. When one considers that it takes better than 100 years to grow a tree to maturity, it is obvious how important this is.

The Forestry Department's program to help private landowners has been greatly needed and is being very well accepted. The people of New Mexico have enthusiastically participated in the department's efforts along this line. Every month there are more and more requests for help coming into the department's office.

The department's fire fighting or-



Governor Edwin L. Mechem of New Mexico, a former land surveyor, F.B.I. agent and practicing lawyer, and always a champion of the "Land of Enchantment," served three previous terms (1951-54, 57-58) as governor. In this article he describes conservation plans for the future of the state of New Mexico.



Ten Year Plan

"Church Rock," near Gallup, N.M., is in an area that abounds with unusual rock formations cut by wind and water

Trout-filled Eagle Nest Lake high in the Sangre de Cristo Mountains calls visitors to enjoy its natural beauty



OCTOBER, 1961



A road winds through the Red River Valley in the Sangre de Cristo Mountains which are the tallest in the state, reaching heights over 13,000 feet

ganization operates on both private and state lands, and has received 90 per cent of its equipment from General Service Administration's excess equipment. The U. S. Forest Service has cooperated in every way to help get New Mexico going on its conservation program.

One of the great dangers to New Mexico's forests is that of pests, particularly the spruce beetle. Infestation usually begins on private lands because of poor logging practices. If the Forestry Department had been in operation ten years earlier this could have been avoided. When spruce cutting first started in the state, some ten years ago, trouble with pests came with it, due to poor supervision of cutting.

In order to aid New Mexico's forestry conservation program a "Ten Year Plan" has been devised by the New Mexico Department of State Forestry under the direction of Ray L. Bell, State Forester. The plan takes a realistic look at the job that is needed and of the organization and funds which will be necessary to do this job.

The "Ten Year Plan" presentation breaks down New Mexico's forest lands into state and private commercial land, state and private non-commercial and watershed lands in need of protection, and federal, state and private lands in need of protection, by districts. A total budget of \$163,520 has been worked out for the State Forestry Service for all forestry activities for the fiscal year 1961, which includes fire protection, management and reforestation. This then is broken down into financial requirements for each of the functions of the department. A flow chart of personnel and their duties, again on a thoroughly realistic basis, is included in the plan. Possible sources of funds are suggested. It is our sincere hope that this "Ten Year Plan" can be put into effect and that it will go a long way toward solving

New Mexico's conservation programs and achieving the aims of the Department of State Forestry.

During the past year, the department has kept very busy indeed carrying out its present programs. Additional radio equipment was procured and a master station was installed in the home of Ray Bell, State Forester. This gives a 24-hour coverage during emergency periods when the fire season is upon us.

A repeater station has been located at Tesuque Peak, one of the highest mountains in the area, and this made a very worthwhile improvement in radio communications in terms of clarity, distances, etc. Besides being definitely essential in fire protection work, we find that the use of radio communication results in much closer contact between field personnel and the main office.

Starting with the 1961-62 season, over 200,000 additional acres of private timber lands have come under fire agreements for protection. This brings the state and private lands under fire protection by the State Forestry Department to well over one-half million acres.

Absorbing all areas just as rapidly as possible wherever feasible for protection by state forestry serves a two-fold purpose: the safeguarding of our present forest areas and the effecting of a much needed increase in our revenue for the expansion of facilities and personnel.

In terms of forest management, assistance in this direction is now being provided to private landowners in two districts: Chama and Cimarron. Plans are being made soon to add the southwestern part of the state as well. More and more requests for assistance have been received, especially for bigger jobs. This has resulted primarily from personal contacts made by district foresters and word spread by landowners who have already received forest management assistance. The Depart-

ment of State Forestry is providing practical assistance in pruning and thinning projects as well. People are beginning to realize that assistance may be received from the Agricultural Conservation Program practice (ACP). As still more realize this, we are sure that the Forestry Department will receive many additional applications for help in this type of work.

The 1959-60 season was New Mexico's first year of handling seedling trees for resale. The department procured stocks of approximately 58,000 of various species from Colorado State Forest Service at Fort Collins, Colorado. This was a great increase from the total shipped direct to landowners from Colorado during the previous season. The total sales of seedlings with New Mexico last year amounted to over 72,000 for the season.

All varieties of these seedlings planted are growing, the percentage of survival being low the first year but considerably improved last year due to the work done by the district foresters in teaching cooperators approved planting methods. Conifer seedlings three and four years old have a better chance if planted in strict accordance with instructions.

At this point planning is underway for a state nursery, although this is as yet in a formative stage. Until the time arrives when we can produce our own stock, Colorado Forest Service has signified that they will supply us with the seedlings required.

New Mexico is intensely, if belatedly, aware of the vital importance of the work being done in forestry and conservation. The time to start an adequate conservation program was yesterday—but today may not be too late, provided the real necessity for conservation of all of our natural resources is realized by more of us.



BEAVERS VS. BIG DAMS



"Slappy," one of the three beavers at the Ghost Ranch Beaver Museum, is a descendant of a long line of big-time, small dam builders and inadvertent soil conservationists



From the Ghost Ranch Museum a circular path leads from the main building, past the animal enclosures, up over the geology observation platform and on to the Beaver Museum. "Beaver National Forest" is in the center area

By WILLIAM H. CARR

AMONG all the mammals in the world, the beaver is second only to man in its ability to manipulate the landscape to suit its own purposes. For more than forty years I have wanted to build a permanent exposition dedicated entirely to this woodland artisan—a beaver museum and more—a place where these flat-tailed workers could be viewed swimming and living inside and outside of a building and, to round out the picture, an area for the display of a lifetime collection of colorful objects covering more than three hundred dramatic years of the relationship between man and beaver in America and Europe.

In addition to depicting the life story and accomplishments of the beaver himself, I also wanted to build exhibits to demonstrate the superiority of small dams over big ones with beaver as outstanding pioneers in this fundamental soil and forest conservation construction activity.

Now the Beaver Exposition, so long contemplated, is an accomplished entity. It is part of the building, animal enclosure, and botanical display at the Ghost Ranch Museum located in the center of a 23,000-acre ranch by the same name, in northwest New Mexico, near Abiquiu, sixty-five miles from Santa Fe. The entire institution has been made possible through the interests of Arthur N. Pack, president of the Charles Lathrop Pack Forestry Foundation of Washington, D. C., the same man and the same foundation responsible for the existence of the Desert Museum near Tucson, Arizona.

The ranch-style beaver structure is provided with two outdoor pools, one of which connects with a large indoor swimming area. The other smaller pool, not viewed by the public, leads directly from the beaver

retiring section, or den, and is for "private" night use only. The den, which is used as a feeding and resting place, is visible, separated from the public by heavy plate glass. Visitors may see the beaver from a distance of only three feet both in the den and also on the "land" section of the indoor pool. Outdoors, only a wall separates the swimmers from the onlookers.

In order to keep the water in the larger pools perfectly clear, a large filter has to be operated constantly. This is only part of the story. Even the filter did not solve the problem with complete success so another scheme had to be devised. Beaver, used to running water and fairly large ponds, are not overly particular about their sanitary habits. Thus, we learned to feed them only in the late afternoon and keep them in the den, with access only to the smaller hidden pool until the next morning. The smaller pool, drained and cleaned thoroughly each day, is used as a water closet by the beaver during the preceding night, enabling the filter to keep up the good work without being over burdened and thus maintain the larger observation pools in a clear, sparkling condition. Never once have the animals fouled their den—and we are grateful for this favor. This was about the only way our furry friends cooperated with us wherein their own welfare and the aesthetic sensibilities of the public were concerned.

The above description has been easily written in contrast with the difficulties encountered by those who designed, built, redesigned, rebuilt, and finally came through with eminently satisfactory ways and means for the adequate exhibition of beaver. The theme song of the builders was "Nobody Knows the Troubles I've Seen." The "troubles" included such adventures as standing on a board suspended over the large pond

Photos by J. Wyatt Davis



Beaver Museum prints cover 300 years. This print of a hunt gave Europeans strange ideas about the habits of beavers

Man could benefit from the beavers' example. The silt laden Rio Chama river was clean 100 years ago when beavers in large numbers built dams at the headquarters to hold back soil





Abiquiu Dam, one of the largest earth-filled dams in the world, lies across the Chama River in New Mexico. It will trap priceless soil and render it useless to man. Smaller, far less expensive dams on the highland watersheds could do a more effective job in preventing floods

In the Ghost Ranch Museum, across from the Forest Service Exposition one section is devoted entirely to the beaver, his works and his ways



where a full-grown beaver swam beneath, became alarmed, and splashed its tail, so suddenly, so hard, and so often that former associate director of the museum, J. Wyatt Davis, perched on the plank, became blinded, lost his balance and fell into the pond to join the beaver. It was February in northern New Mexico. As Mr. Davis climbed out of the cold pond, he was filled, not only with water but with warm expletives of a character which kept him from freezing. The beaver simply swam off, probably to wait for another opportunity to demonstrate his endearing qualities.

Mr. Davis, who did so much to make the exhibition a success, was not the only one to experience surprise. When the work was in its early stages, I stood beside the large excavation which was ready for concrete that would form the pool. Out of the corner of my eye I saw a large bloodhound which, unannounced and uninvited, was casually visiting the museum grounds despite the sign near our entrance which reads, "No Dogs, Please, For Good Reasons." The red hound was alone. He had journeyed from the ranch headquarters, three miles away, under his own steam. He was a sad, flop-eared, droopy-faced creature without a bad thought or probably any other thought in his large head. He was the kind of bloodhound that gets

lost and has to be found by children. His presence was disturbing to the animals in our enclosures so, to discourage him, I picked up a clod of earth and, with all my strength, heaved it in his general direction.

The next thing I knew, my friends were picking me up from the bottom of the excavation, startled, chagrined, but with no bones broken. My effort had been so great that when the clod left my hand, I spun about, twisted my ankle and fell headlong into the deep hole. The only trouble was that, in my case, there was no water there at the time, only rocks. The clod had not come within a mile of the hound. He did not even have the grace to look alarmed. Somehow, he appeared to be pleased. However, I got even with him a few days later when he paid a return visit, no doubt to see what other amusing human antics he could observe. Don't misunderstand me—I like dogs. In fact, some of my best friends are hounds. Anyhow, this time he made his approach just at the rear of the den of our favorite among all animals on exhibi-

bition, George, our fine mountain lion. The dog came steadily on as we watched. George was in his den, noting the approach from a small window. The big lion bided his time and then when the unwitting hound was about to put its inquisitive but still uninformed nose right below the window, George opened his well-armed mouth and gave a loud, terrifying, "Whooruff!"

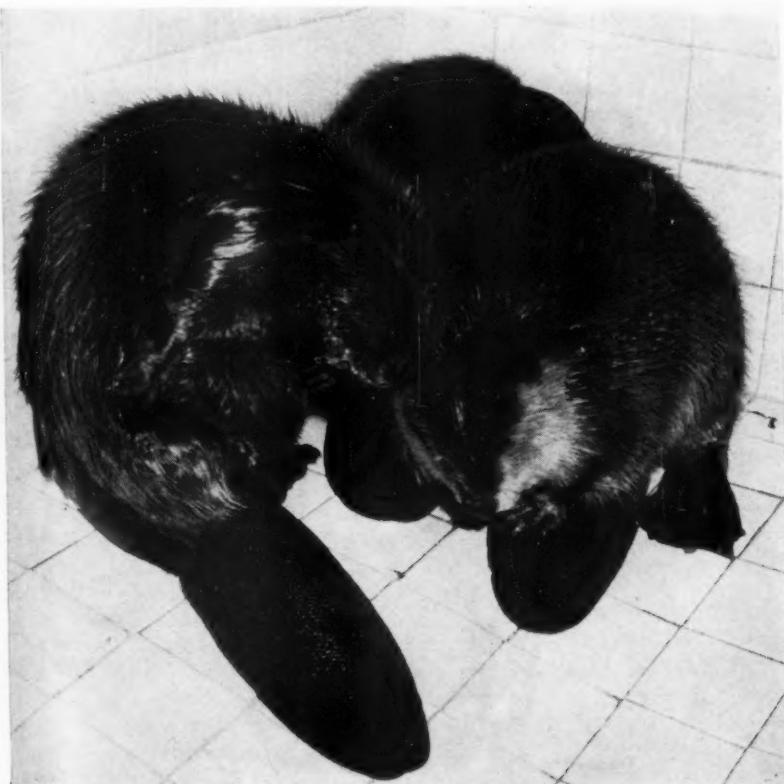
The hound was so shaken that he fell over backward in an awkward heap, head over teakettle, then jumped up and ran off across the wide open plain, looking backward over his shoulder as he went, until he dashed full tilt into a large cactus plant, whereupon he gave a howl of his own, picked himself up for the second time and disappeared over the horizon. We have not seen him at the museum since. He has lost interest.

In order to insure near perfect visibility of the three beaver now on exhibit, the indoor pool was lined with white tile after much trial and error with other materials, including everything from mud to mortar. One

visitor said it "looked like Cleopatra's bathtub." One can't win at this sort of thing. We never were made aware of how this man secured his information about the Egyptian queen's bath. The chances are, however, that it was not filtered. This incident led to our calling one beaver Cleo. The others were called "Slap-Happy," or "Slappy" for short, and "Chief Hole-in-the-Head," or "Holey," by those who know him best. The reason for this last name was that this particular beaver *did* have a hole in his head. He was received in this peculiar condition from the New Mexico Game and Fish Department. When the boys first told me of the hole, I did not believe it. I said, "Oh, it's just the air coming out of his nostrils when he's submerged and traveling up through the mud to appear as though it were coming out of the top of his head." But I was wrong. I watched the animal swim and then rest upon the pool bottom. Bubbles of air arose from the top of his head and he then surfaced. We took him from the pool and made a close examination. Sure enough, there was a neat, well-healed round hole just above his sinuses. He may have been bitten in infancy. Perhaps his mother slipped when teaching him to chew. We don't know. All that is clear is that he feeds well and seems perfectly healthy. He's just "different," that's all.

In order to show something of the beaver's skill in building dams, we have resorted to dioramas, or small "working" models, which demonstrate various ways the animals create ponds to protect their houses, float their food, and serve as a means of escape from lurking predators. This project also presented us with an opportunity to demonstrate the value of small upstream dams to man. In fact, we realized that we had a splendid chance to explain the usefulness of such water-holding structures as compared with huge, costly, and actually destructive dams at present being built in our country with federal funds, i.e., taxpayers' money.

Not far from the Ghost Ranch Museum is one of these stupendous dams, now under construction at a cost of millions of dollars. This dam, near Abiquiu, New Mexico, is being placed across the Chama River which flows through Ghost Ranch property. It is being billed as "One of the Largest Earth-Filled Dams in the World." Ostensibly, it is intend-



Resting on their spick-and-span tile floor, beside the indoor pool, "Slappy" and "Cleo" face the camera while "Chief-Hole-in-the-Head" sticks his head in a hole



"Here is where I want to be buried," said Uncle Mack. "I don't want no damned lawn mowers running over my grave." A headstone provided by a natural granite boulder and a spire of saguaro cactus mark the grave on Screwtail Hill in Tonto National Forest

UNCLE MACK AND MULTIPLE

By DON DEDERA

ONE sun-splashed Sunday a quarter of a century ago N. B. F. McCord stamped his foot on a granite knoll of Tonto National Forest.

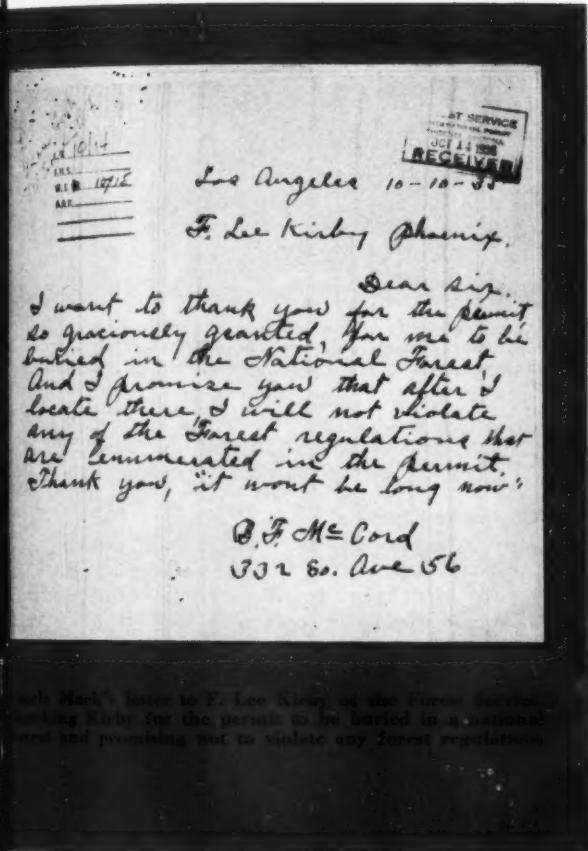
"Here is where I want to be buried," said Uncle Mack.

His picnicking companions scoffed. The slope was bleak, lonely, inelegantly named Screwtail Hill, and 45 miles from the tidy green cemeteries of Phoenix, Arizona.

"I don't want no damned lawn mowers running over my grave!" thundered Uncle Mack, and that was that.

Soon afterward the irascible old railroader petitioned the Forest Service for a burial plot. In those days of dominant local influence of Southwestern national forests, the request seemed most reasonable. The cemetery was surveyed; the formal permit issued; the grave blasted from the hillside.

In time, Uncle Mack died. His friends worried his coffin up the torturous dirt trail, filled his grave, and held simple services under a saguaro cactus spire. On a great boulder stonecutters chiseled two words. They are there to this day: MACK'S REST.



Uncle Mack's letter to E. Lee Kirby of the Forest Service asking Kirby for the permit to be buried in a national forest and promising not to violate any forest regulations.

HOUSE

I trust Uncle Mack, who so loved the land and forests of the Southwest, sleeps well. But what would he think if he could wake and see the changes that have come to his one-eighth acre cemetery—to the Mesa Ranger District—to Tonto National Forest—indeed, to the entire Southwestern Forest Region?

Everywhere can be seen the maturing practices of sustained yield and multiple use.

On maps of arid Arizona and New Mexico the green national forest patches are scattered like recklessly tossed salad. They comprise 20 million acres, with somewhat the greater share to Arizona. New Mexico has headquar-

ters for the Carson, the Cibola, the Gila, the Lincoln, and the Santa Fe Forests. Supervised from Arizona are the Apache, the Coconino, the Coronado, the Kaibab, the Prescott, the Sitgreaves, and the Tonto.

Nowhere in America can be found greater variety in vista, climate, humanity, and life form.

Elevations vary from 1,500-foot desert to Arizona's Humphreys Peak, 12,670, to New Mexico's Wheeler Peak, 13,160.

From cactus to spruce, in a glance. Six life zones, in a day's hike. Skiing to swimming, in an hour's drive. Soils of all origins: sedimentary, metamorphic, igneous. Ghost towns that died in a week to resort communities created in a month.

From low country to high, precipitation averages from 6 to 34 inches annually, but some parts of the forest may go half a year without a sprinkle, and several years without a soaking rain.

Temperatures, 33° below to 115° above. Creatures: coati mundi and jaguar of the Mexican border to antelope and turkey of the mountain meadows.

From these belts of spruce-fir, pine and chaparral flow three-fourths of the water for Arizonans and New Mexicans. And cattle graze on ranges explored by white men 80 years before the voyage of the Mayflower.

In and under the ancient forests burgeon young, hyper-active, multiplying populations. From the 50 states rally the tourist legions, seeking romance, challenge, space. The length of the old Butterfield Trail is spanned in two hours today, by jet. Rich in new-found leisure, the tourists hunger to tread upon their 183-millionth portion of the national woodland.

Charged with the care of these forests is Fred H. Kennedy, regional forester. An Idaho outdoorsman, he has broad experience in range and wildlife management in forests of the West. Kennedy in his task has likened himself to Mullah, the Persian traveler.

"He heard the people of the village say as he passed through, 'Why should the poor donkey be overloaded with both the old man and boy riding him?'

"In the next village the villagers said, 'Why should a young boy ride and the old man walk?'

"Well, Mullah changed that by having the grandson walk while he rode the donkey."

"The people in the next village said, 'Shame! You a full grown man riding and making the small boy walk.'

"Mullah crawled off the donkey, shrugged his shoulders and said, 'What a wonderful world we live in. You cannot please any of the people any of the time.'"

Now the broad paved highway passes 100 yards from Mack's Rest. A four-wheel-drive pickup truck fitted with a camper unit roars up Screwtail Hill. The family will turn down through Jake's Corner and Punkin Center to an arm of Theodore Roosevelt Lake. Dad and the boy will troll for bass. Later the family will tarry under pines near Payson, where sister will add to her butterfly collection and mother will take her first afternoon nap in weeks. The men will seek rainbow trout on the East Verde. Now the pines are two hours from downtown. Par for the course used to be six hours and two tires.



Fred H. Kennedy, regional forester, the Southwestern Region, stands in front of a scene of the Pecos Wilderness Area in the Santa Fe and Carson National Forests

In the Southwest, recreation is the concept of multiple use that means most to more people in greatest multiplicity.

Populations of Arizona and New Mexico are booming. In a decade, Albuquerque has grown from 96,000 to a trading area of 270,000; Phoenix from 106,000 to a sprawling metropolis of half a million. Moreover, the Southwest has become a target of millions of American tourists.

During the 1950's, visits to Southwestern national forests zoomed from one to eight million. This year there will be close to nine million.

They come . . .

To photograph wildflowers, to hike, to seek the Lost Dutchman Gold Mine, to paint landscapes. . . .

To poke about Indian ruins, to hunt gems, to write poetry, to climb mountains, to call up varmints, to float down rivers. . . .

To ride horses, to mark the shrines to Billy the Kid, to breathe a piney breeze, to fish and hunt, to study geology, to handfeed squirrels. . . .

They come to roast marshmallows, to swim, to drink bourbon and branch water, to watch birds, to hammer upon 2,500 summer homes, to ski at seven slopes, to sit on stumps, to snooze in hammocks, to pitch a tent.



Logging the Jemez District of the Santa Fe National Forest. In 1960, the Southwest forests gave up 254 million board feet of lumber, a drop from 330 million board feet in 1959

Thirty years ago a forest ranger at Oak Creek Canyon, with some alarm reported the passage of 400 cars through his forest in one year. He predicted twice that number if the road were paved.

In 1960, a million cars went through Oak Creek Canyon, and forest visits totaled 200,000. Housekeeping for such crowds is an especial problem in the Southwest, where the mild climate can preserve a beer can for 25 years and allow a facial tissue to bloom on a bush the summer long.

Quickenning recreation use is repeated at 65 lakes in Southwestern national forests, and along 1,832 miles of trout streams, and in 300 camp and picnic areas. To progress with demand, new playgrounds are being opened, such as the Sierra Blanca, a winter sports facility in Lincoln National Forest on the most southerly 12,000-foot peak in the United States.

Increasing millions come for all manner of activity—and they come for rest, for peace, for wilderness.

In the Southwest, the wilderness calls with provocative names: Blue Range, Gila, Superstition, Pecos, Mount Baldy, Chiricahua, Sierra Ancha, Mazatzal. The poet writes—

Wilderness is expanse

And each fixed or fleeting form

Reflects the artistry of nature.

Wilderness is a whole environment

Of living things.

And the prosperity of its native wildlife

Measures the perfection of its water and floral mantle.

Wilderness is the beauty of nature, solitude,

And the music of stillness.

Wilderness invites man

To adventure, refreshment and wonder.

These priceless wild expanses are preserved for the grandchildren of grandchildren, for the surviving bald



In 1960, the Forest Service and co-operating agencies cleared nearly 50,000 acres of sagebrush and noxious scrub conifers off grazing lands. Grass and other forage seeds were cast on approximately 58,000 acres

Don Dederer, columnist for *The Arizona Republic* in Phoenix and a graduate of Arizona State University, was a 1958 winner of \$1,000 Ernie Pyle Memorial Award, presented by Scripps-Howard for "writing exemplifying the skill and craftsmanship of Ernie Pyle." In 1960, he was the winner of the Arizona Press Club award for the best news story of the year. Also in 1960, his first book was published, "A Mile in His Moccasins," a collection of stories about the Southwest. He is a member and past president of the Phoenix Press Club. Mr. Dederer describes himself as an "ardent outdoorsman, feckless fisherman, stumpsitter, buckfever hunter, trail ride comic, and Arizona's champion camp chowhound."



eagle and other oppressed species, as reminders of the nation's hard and eloquent beginning, and they sorely tempt exploiters.

Fortunately, wilderness has staunch defenders. Richard E. McArdle, chief, Forest Service, has said, "The wilderness offers a chance to get away from crowded, noisy, smelly cities to the quiet solitude of the deep forest, where a man can take time to think things out. These areas have no roads, no commercial timber cutting, no hotels, stores, resorts, developed campsites, or summer homes."

A baldface Hereford heifer with the Circle Bar O brand of Bernard Hughes plods up the flank of Screwtail Hill. She trims the tender brome edging a grave marker under a boulder marked with strange symbols. It is grass-cutting time at Mack's Rest.

Into the equation called multiple use, Southwest foresters counted 231,000 cattle and 136,000 sheep last year. They are impressive figures, considering that many miles-squares of forest land are incapable of sustaining one cow.

Before the white man came, nature had judged the Southwest to be unsuitable for grazing animals. The black clouds of bison never crossed the Pecos. Until the 1880's, a major part of the Southwestern forests were virgin grasslands. Two of the West's most violent range wars, of Lincoln County, New Mexico, and Pleasant Valley, Arizona, were fought before the land was parcelled.

Today 70 per cent of the forest is grazed, by the cattle of some 3,000 families and firms.

The Forest Service and cooperating agencies in 1960 cleared nearly 50,000 acres of sagebrush and scrub conifers, noxious to cattle. Grass and other forage seeds were cast on 58,000 acres. Range managers strung 150 miles of fence, and developed 200 new stock watering places. All this, in a year.

In winter the gray clouds curl up the draws and doze for days on the slopes. Rainfall is measured in inches, and snowpacks in feet. The rills are shed from Mack's Rest and overfill Sycamore Creek and join in a torrent to the Verde and Salt Rivers and are distributed from Granite Reef Dam, whose purpose and those of higher structures cannot be discussed intelligently by five in 100 Salt River Valley residents, even though their lives and fortunes depend on the nation's first major reclamation project.

"A difficult and often discouraging task, this seeking to get the general public to recognize and appreciate their own water situation," Dr. McArdle has said.

Someone has likened the Southwest's water puzzle to the dilemma of a fickle, unwed, pregnant lass. The problem is more obvious than the cause, has little to do with intent, and will grow before it improves.

In a sense, the Southwest has been facing a critical water shortage since it was settled. As far back as 1885, Big Dan Ming was called upon to offer a prayer in behalf of his cattlemen's association. He made the men remove their hats, lifted his head in ruddy embarrassment, and bellowed:

"Oh Lord, I'm about to round You up for a good plain talking. Now, Lord, I ain't like these fellows who come bothering You every day. This is the first time I ever tackled You for anything, and if You will only grant this, I promise never to bother You again. We want rain, Good Lord, and we want it bad; we ask You to send us some. But if You can't or don't want to send us some, then for Christ's sake don't make it rain up around Hooker's or Leitch's ranges, but treat us all alike. Amen!"

And cattlemen and farmers have come to realize that the country may need more than a good rain, now and again.

In super-dry Arizona, the evaporation rate per year on



The lumberers who were grossly careless in their logging and skidding on this private land in northern New Mexico must be shown the harm that comes from malpractice

the wettest watershed is 36 inches. At Roosevelt Lake, the rate is eight feet! In other words, every year an 8-foot layer of the state's most important irrigation reservoir simply disappears into thin air. A gallon of water must be released from Roosevelt to deliver a half-gallon to a farm.

Only by dipping into underground reserves have Southwestern farmers held back disaster. Nobody is sure how long the groundwater will last. The tables are sinking fast.

Meantime, the high country has problems of its own. Ernest W. Chilson, past president of the Arizona Cattle Growers Association, tells a story that could apply to watersheds along the Mogollon Rim in both states.

"Thirty years ago in northern Arizona," says Chilson, "a deep well or an earthen dam of any size was almost a rarity. I can well remember my father's operation on the Coconino National Forest during that period. This particular range land which consisted of approximately 30,000 acres was amply watered with natural water and six small usable earthen dams and was adequately carrying relatively large numbers of cattle."

"Approximately the same range today has 22 usable earthen dams and one deep well and this only serves less than one-half the number of cattle than it did earlier."

"There is only one live spring or seep today where there were many 30 years ago."

But for good reason or bad, nowadays in the Southwest the rancher's lament often is flung back into his teeth, or his father's or his grandfather's. Pioneer cattlemen raped the forests, out of ignorance or need or greed. Often it is that modern ranchers who subscribe devotedly to conservation, are painted with the same broad brush.

The business of raising a beef is inflexible. A rancher cannot remove his critters from 20 sections of marginal hardscrabble every week the feed is puny. To this day some ranges are hurtfully overgrazed, and there is no duplicity when the Forest Service cites the majority of Southwestern grazing permittees for "doing an outstanding job of cooperating with us in improving and managing national forest ranges."

If overgrazing was once the rule in the mountains, the people of the valleys deserve a measure of blame.

For example, Salt River Valley crops are worth \$6 a year for every acre of its watershed. Under best conditions, forest acres produce but \$2 in lumber and 50 cents in meat.

"Yet only in recent years has the Forest Service received the public support necessary to enable it to give proper consideration to the watershed values," says Lee Hover, Arizona game commissioner.

Then there are the water-user extremists. They want to manipulate watershed cover for the sole sake of runoff.

Regional Forester Kennedy has answered them. "What guarantee is there that all additional runoff, if any, would ever reach the valleys?" And, "These pine and spruce-fir areas provide nearly 100 per cent of the timber, and attract 85 per cent of the tourists and 65 per cent of the hunters and fishermen. All of these uses would be affected by the drastic treatments proposed."

Southwestern policy now gives primary importance to improving water yield for the Salt River, Paradise-Verde, San Carlos-Casa Grande, and Elephant Butte projects. Depending directly upon the forests for municipal and industrial water are the cities of Phoenix, Flagstaff, Globe, Miami, Prescott, Williams, Santa Fe, Las Vegas (N.M.), Alamogordo, and Silver City.

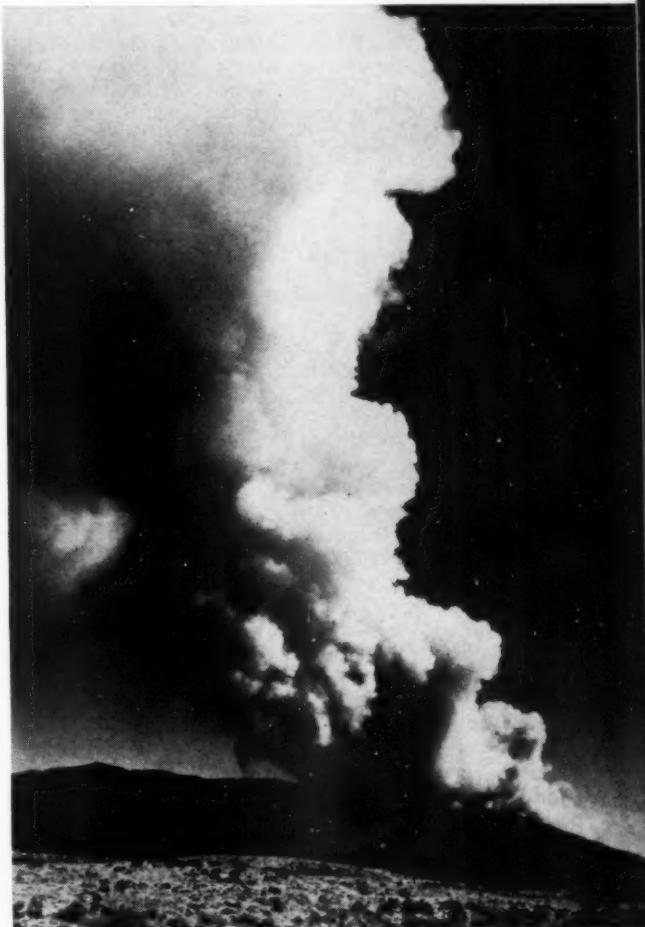
The scope of Southwestern watershed management is suggested in some staggering statistics. In 1959, contour trenching, gully plugging, and seed scattering covered some 100,000 acres of the Lincoln and the Cibola, and 89,000 more in Coronado. On the Tonto, 30,000 acres were seeded after fire. Success depended on rainfall, and sometimes it rained too little, and sometimes too much.

In 1960, rehabilitation continued on five projects totaling 160,000 acres. Some of the riddles—of evaporation, of strip-cutting, of transpiration, of siltation, of penetration—received continued study at three major pilot watersheds.



The Rio Grande Canyon near San Antonio, New Mexico, reveals the beginning of heavy erosion which is typical of the overgrazed condition in the lower one and one-half miles of the canyon

A terrifying sight anywhere. Irreplaceable forests that took decades to grow are sent skyward in cloud of useless smoke



Most pine of the Southwest has been cut over once. Loggers are just getting a good start on the spruce and fir.

Sustained yield is not yet being cut. In 1960, when the lumber market was down nationally, the Southwest forests gave up 254 million board feet. This is a drop from the 330 million board feet of 1959, and far below the estimated 366 million that might be cut every year under sustained yield.

The forests keep 200 mills humming, providing work for 4,800 men.

Once again, the resource must be actively managed. Last year 55,000 acres were thinned, pruned, and given release cuttings. Skirmishes against the porcupine, voracious destroyer of young pines, continued. Thousands of acres of trees were sprayed from the air for control of tussock moth, Black Hills beetle, and Englemann spruce bark beetle.

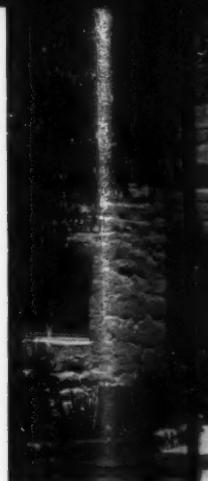
The national forests of the Southwest are not Disney-lands, to the pleasure of a million fishermen a year, and 370,000 hunters.

(Turn to page 80)

They Came for Water

... A Visit to Bandelier

By WILLIAM A. SCHNETTLER



WATER, one of the most precious commodities in the Southwest today, was equally as important to the prehistoric peoples who settled in Frijoles Canyon in the late 13th century. It was, in fact, a need for water which brought several harried groups of Pueblo Indians into the area that is now Bandelier National Monument, only a few miles from Santa Fe, New Mexico, as the crow flies, but 45 miles by road.

A disastrous drought, which seems to have plagued much of the Southwest, broke up many Pueblo Indian centers and forced those who survived to move where the water supply was more constant. A favorable area was the upper Rio Grande Valley in what is now New Mexico.

Several groups settled on the canyon-sashed slopes of the Pajarito Plateau, in a spectacular setting, characterized by tan cliffs, forested mesas, and deep gorges. They chose well their location, for the canyon, cut by a stream rising high in the mountains, is still a veritable oasis in the dry country. The stream, *Rito de los Frijoles* in Spanish, becomes simply Bean Creek when translated.

It is possible that the names of the canyon and the stream which flows through it were derived from one of the staples which the inhabitants raised on the fertile land. Corn and squash were also grown by the displaced pueblo dwellers, who were essentially farmers. Cotton cloth has been found in some of the caves in which they lived, indicating that they had cotton and understood the use of the loom. However, since the growing season on the plateau is short, cotton may have been obtained by trade. Pottery with decorations in glaze has also been found.

The ruins of the ancient dwellings,

the most accessible features of Bandelier National Monument, are characteristic of the later flowering of Pueblo culture which occurred there.

Cliff ruins, or talus villages, extend along the base of the northern wall of Frijoles Canyon for approximately two miles. The houses of masonry were irregularly terraced, from one to three stories in height, and had many rooms which were gouged out of the solid cliff of compressed volcanic ash with tools of hard stone.

Tree-ring chronology and correlations of pottery indicate that most of Bandelier's ruins belong to the late pre-Spanish period, although a few small ruins date back to the 12th century. This may be an indication that small groups of the drought-stricken Pueblos preceded the main body of refugees into the canyon. Two large pueblos, Tyuonyi, on the canyon floor between the cliffs and the stream, and Tsankawi, in a detached section of the national monument, evidently were occupied until about A.D. 1550. Their decline had probably set in, however, before Coronado visited the region in 1540 because there is no specific mention of Pajarito villages in the chronicles of his expedition.

The exact cause of abandonment of the dwellings is unknown. It can be assumed, however, that with the passing years another drought, flash floods which eroded the soil, depletion of the soil, raiding Indians, famine, or disease—singly or in combination—forced the canyon dwellers again to seek new homes.

There are a number of modern Pueblos along the Rio Grande, within a few hours' drive from Santa Fe, and it is likely that some of the Indians who live there are descendants of Indians of the Pajarito Plateau.

The Pajarito Plateau is of interest geologically as well as archeo-

logically. It is constituted largely of tuff (consolidated volcanic ash) and basaltic lava ejected thousands of years ago from the great volcanic crater—one of the largest in the world—whose rim today forms the Jemez Mountains. Through this massive plateau, running water has cut many steep-walled canyons down to the Rio Grande.

Those who take part in the field trip to Bandelier National Monument in October will have time for little more than the scheduled conducted tour of the ruins, following the slide-illustrated orientation in the visitor center. However, some may wish to return after the meetings in Santa Fe to hike over some of the 30 miles of trail into the back country of the monument.

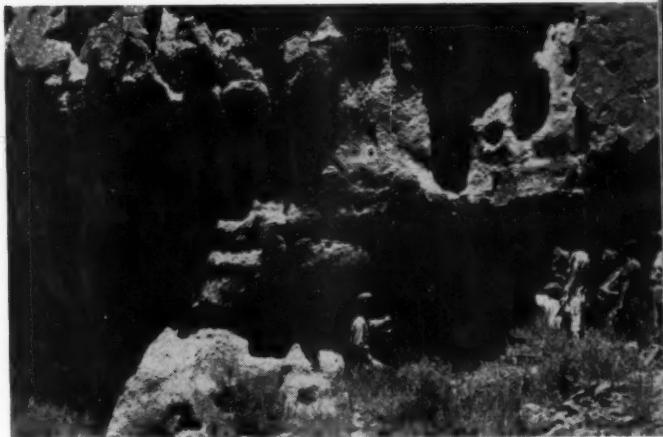
Ninety per cent of the total of 48 square miles which make up the area is wilderness, through which no roads have been or will be built. This wild land serves as an impressive scenic backdrop for the prehistoric ruins and as a source of wilderness experience for the more inquisitive. Visits to the back country, on foot, are encouraged by the National Park Service, which administers the area. Some of the features to be enjoyed are the gorges of Alamo Canyon, the pueblo ruins of San Miguel and Yapashi, White Rock Canyon of the Rio Grande, the Stone Lions, carved from rough rock by Indians, and Painted Cave, containing some interesting pictographs.

Bandelier National Monument was named in honor of Adolph F. A. Bandelier, a distinguished Swiss American scholar, who carried on an extensive survey of prehistoric ruins in the region and studied the Pueblo Indians around Santa Fe between 1880 and 1886. Part of his time was spent in Frijoles Canyon, and the plot of his ethnohistorical novel,



Tourists at Bandelier National Monument troop through the Visitor Center to the rear of the building where the trail begins that will take them to the cliff and pueblo ruins

A ranger tells visitors how the prehistoric people used stone tools to dig caves in the soft tuff rock of the canyon walls



The Delight Makers, is laid in the canyon as he pictured it in prehistoric times.

In addition to Bandelier National Monument, the National Park Service also administers the following areas in New Mexico:

Carlsbad Caverns National Park—largest underground chambers yet discovered; a series of connected caverns with countless magnificent and curious formations.

Aztec Ruins National Monument—ruins of a great historic American Indian town built of masonry and timber in the 12th century.

Capulin Mountain National Monument—symmetrical cinder cone, an interesting example of a recently extinct volcano.

Chaco Canyon National Monument—thirteen major Indian ruins representing the highest point of Pueblo prehistoric civilization; hundreds of smaller ruins.

El Morro National Monument—"Inscription Rock," sandstone monolith on which are carved hundreds of inscriptions of Spanish explorers and American emigrants and settlers; also prehistoric petroglyphs.

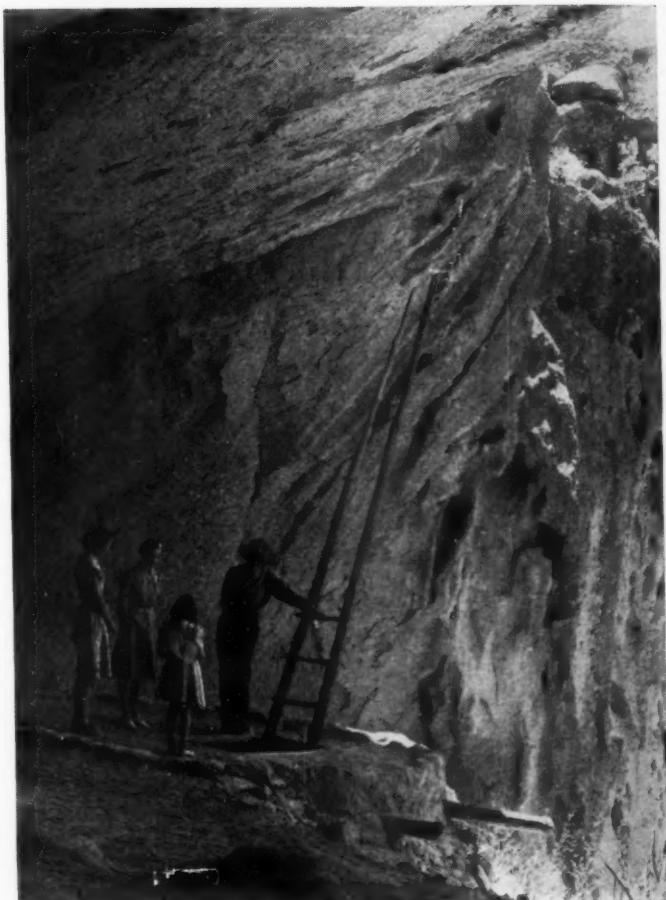
Fort Union National Monument—ruins of the key fort that shaped Southwest destiny, 1851-91. On the Santa Fe Trail, it was a base for both military and civilian adventures.

Gila Cliff Dwellings National Monument—well-preserved cliff dwellings in face of overhanging cliff. This area is inaccessible except to specially equipped vehicles.

Gran Quivira National Monument—site of the 17th century Spanish mission; ruins of two mission buildings and 18 Pueblo Indian house mounds.

White Sands National Monument—white gypsum sands, in dunes up to 45 feet high; small animals, light in hue, adapted to environment.

High on a cliff of Frijoles Canyon is "Ceremonial Cave," so named because it contains a small kiva or underground ceremonial chamber built by the prehistoric inhabitants



PASO POR AQUÍ

By GEORGE FITZPATRICK
Editor, *New Mexico*

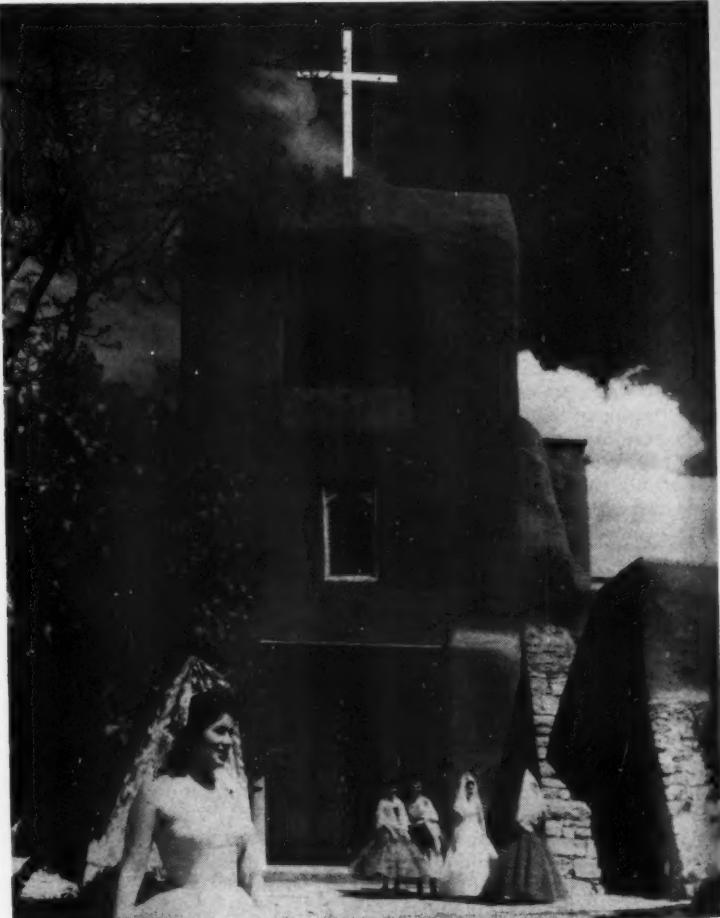


These remarkable murals show graphically the religious beliefs of prehistoric Pueblo Indians. These murals were discovered in a kiva, or ceremonial chamber, at ancient ruin of Kuana, now preserved as Coronado State Monument, near Bernalillo, N. Mex.

The Queen of the Santa Fe Fiesta and her court pose beside the ancient San Miguel Church in Santa Fe, New Mexico. The church, built in the early seventeenth century, is considered one of the oldest in the United States



These Indians, in native garb, sell their beads, blankets and pottery across the street from La Fonda in Santa Fe, N. Mexico



AMERICAN FORESTS



THE other day I stood before the smooth stone face of the great rock, El Morro, and read again the inscription by the first Spanish governor and colonizer of the province of New Mexico. This is the famous inscription that starts with the now well-known Spanish phrase, *paso por aquí*.

Carved with a dagger point in the soft stone, the message reads:
"Here passed the Governor Don Juan de Oñate from the discovery of the Sea of the South on the 16 of April of 1605."

This is where recorded history be-

gan in what is now the United States, for here the early Spanish explorers carved the record of their passing. Coronado is known to have passed here in 1540, though no inscription has been found. A record of the Rodriguez expedition of 1570 was noted in the 1880's but has since been lost or obliterated. But there are many others down through the years—and then American military men, emigrants and travelers in the 1800's.

Standing at the natural water tank at the base of the great rock (which was the reason for its choice as a

campsites) you can almost smell the incense of their piñon fires, hear the jovial shouts of bearded men relaxing after a day in the saddle, or see in the distance the plumes of dust kicked up by another little band of *conquistadores* trying to make it to the rock before darkness.

Throughout the centuries the rock was like a beacon light to mariners. Almost until the time the United States government set aside 160 acres as a national monument it was the "register" for traveling parties.

History seems to come alive at El Morro as you study the "signatures"



The State Capitol of New Mexico at Santa Fe. The Capitol buildings, completed in 1953, are designed in a modification of the territorial style of architecture



Inscription Rock is a feature of El Morro National Monument. Early explorers rested here and carved their names and dates of encampment. Dates inscribed on rock extend back to 1605

not only of the Spanish explorers but the hundreds of such recent visitors as General Howe in 1882 and General E. Z. Carr; John Udell, who came with the first emigrant train to pass this, was in 1858; Dominguez, with *Compania Efe* in 1863; Lt. Beale, who passed here with his camel train in 1857, and R. H. Kern, who copied the inscriptions while on Army reconnaissance in 1849 and returned two years later to add his name a second time.

A day's ride took the travelers to Zuñi Pueblo. This was one of the "Seven Gold Cities of Cibola"—whispers of which so intrigued men's minds back in the early 1500's that a young *hidalgo* of Spain, Francisco Vasquez Coronado, helped finance his own expedition to find the cities and the gold that was to be had for the taking.

It was this "impious lust for gold," as an old history book puts it, that brought the first Spanish explorers to the Southwest. About all the gold

they found was in the mirages of golden cities glittering in the sunset. But their restless search was the prelude to colonization, and Don Juan de Oñate had already established a thriving colony of settlers and a temporary capital in northern New Mexico when he went exploring and carved his *paso por aquí* on the face of El Morro in 1605. (If such a reminder is necessary, this was 15 years before the Pilgrims had stepped ashore at Plymouth Rock!) Within five more years, in 1610, a permanent capital was established at Santa Fe.

And because New Mexico is so close to the past, history comes alive as the visitor wanders across the plaza in old Santa Fe to the Palace of the Governors that looks now as it did when the Spaniards built their mud *palacio* from the crude materials at hand.

Stand in front of the palace and you can still see in your mind's eye the dashing and brave De Vargas as

he harangued the Indians after the bloodless reconquest of Santa Fe in 1692, after 12 years of Indian rule. Stand under the portal and you rub shoulders with the people who stood in this very spot and listened to General Stephen Watts Kearny as he read the proclamation of 1846 that annexed New Mexico to the United States after another bloodless conquest. Or roam through the thick-walled rooms of the palace, and you walk in the footsteps of Zebulon Pike, the dashing young American army officer who was a prisoner of the Spanish here when he verged over the boundary on an exploration to the sources of the Arkansas River. It is for him that Pike's Peak is named.

In one nook of the old building you can stand alongside General Lew Wallace's chair and look over his shoulder as he puts the finishing touches on *Ben Hur*.

In another room, a mere private in the ranks wrote the set of basic



Able Editor
George Fitzpatrick of *New Mexico Magazine* edits one of the most attractive magazines in the country about one of the most attractive states—New Mexico.

An historian himself, Mr. Fitzpatrick has the colorful history of his state at his fingertips. One of his more recent articles was "The Real Elfego Baca"—a true account of the fabulous gun-slinging lawyer who has become a Southwest legend and who was further immortalized by Disney in "The Nine Lives of Elfego Baca."



Old Santa Fe Plaza is still the original heart of the city and has changed little since the founding of the Villa Real de Santa Fe de San Francisco in 1609. The shady Plaza probably has been popular play area for children for over 300 years



laws by which New Mexico was governed from 1846 until statehood. Actually, he was a private in rank only, for Willard P. Hall, who compiled the set of laws known as the Kearny Code, was a 26-year-old attorney in Missouri and had given up a campaign for Congress to enlist in the Army of the West, which occupied New Mexico. The people of Missouri elected him to Congress anyway and he received word by army dispatch on the day he and a clerk were completing the final draft. This unsung hero of New Mexico returned to Missouri to become Congressman for several terms, lieutenant governor and governor. Just knowing about this young man's part in opening this new southwestern empire adds sparkle and drama to the long history of the old palace.

And so it is that almost everywhere you go in New Mexico, you feel the spirit of living history. You walk in the footsteps of familiar names, or ride along in a car close to the great

ruts of the Santa Fe Trail that brought a stream of humanity to the far frontier, or stand in the shadow of men whose names loom big in history and legend.

To follow old paths and tag along in the footsteps of history is one of the joys of living or visiting in New Mexico. Not long ago, my wife and I were returning from a trip to southern New Mexico. With no pressure of schedules to make, we turned off U. S. 85 onto a ranch road when we arrived at a highway sign marking the location of old Fort Craig. This fort, halfway between Santa Fe and El Paso, five miles off present U. S. 85, was once one of the great forts of the southwestern chain. Within sight of the fort, the Civil War battle of Valverde was fought—and won by Confederate forces. Today only the adobe walls remain, and there was no living thing to be seen but a chaparral cock that paced our car for a hundred feet when we trespassed in his domain.

But it took but little imagination to see Fort Craig at its liveliest—the Stars and Stripes fluttering from a high flagstaff, the men in blue going about their tasks—policing the parade ground, shoeing horses at the blacksmith shop, carrying water to the kitchen, or any of the other dozens of jobs necessary to keep a 3,000-man post going.

Close by the blacksmith shop we saw a rusty horseshoe, partially buried in the adobe ground—uncovered perhaps by a recent rain. We followed the path where the rain had washed, searching the ground with our eyes.

Square nails we saw by the hundreds and picked up a few of the best ones. Then searching close to the ground we found a few brass buttons, now dirty and rusted, and then the prize: the crossed swords hat insignia of a long-ago trooper. It was enough encouragement to continue the search. A metallic disk of some

(Turn to page 62)

Riders Up



By ELLIOTT S. BARKER

NEW MEXICO is aptly styled "The Land of Enchantment." Its surprising attractions are myriad—historic, scenic, archeologic, national forests, parks and monuments, western ranching, scientific projects, wildlife, and other natural resources.

Not the least of these attractive resources are its wholly unsuspected wilderness areas.

As travelers speed across the state on its several U. S. highways, which skirt the rugged country, little do they suspect that a multitude of utterly charming, cool mountain retreats can be easily reached by car. Much less do they suspect that within the boundaries of the state's six national forests eight units, embracing slightly over a million acres (11 per cent of the total national forest area) are being preserved as wild, primitive, and wilderness areas.

These bits of paradise in their pristine grandeur are unspoiled by man's ruthless, mechanized civilization. Their magnificence far exceeds anything man is capable of building.

As a place to escape the nerve-wracking stresses and tensions of modern urban life, revive one's spirits and restore one's soul they have no peer. My poem, *Wilderness Temple*, expresses that thought.

*As a place to relax there's
no spot that I know
Can compare with a seat in
a campfire's red glow.
When you solace require for
tired spirit or mind
Seek the wilderness trails,
there refreshment you'll
find.*

*Although cities may boast
of their grandeur and
sheen,
Yet they never can match
pristine forests I've seen.
There tall trees and high
peaks raise their crowns
toward the sky*

The peaks of the forest covered Sangre De Cristo Mountains loom over the Pecos Wilderness Area

*As in silence they praise the
Creator on High.
Not a church will you find
nor a shrine built by
man
That inspires faith in God
as the wilderness can.
It was Moses then Christ
went to mountains for
prayers;
Whatsoever their needs, are
not ours more than
theirs?*

New Mexico's wild, primitive, and wilderness areas are mostly in the high, back country. Their greatest value, aside from the aesthetic and spiritual, is their high water yield for irrigation and municipal uses below. Preservation as wilderness affords essential optimum watershed protection. As wilderness, they still serve multiple purposes.

They all have a high value for wildlife and afford excellent hunting and fishing for those who prefer such recreational activities in remote, primeval settings. They have some value for grazing and regulated use by livestock is permitted. But lumbering, mining, summer homes, roads, and other types of commercialization which would mar their pristine condition are prohibited.

How then, without roads, can the public enjoy them? Roads lead to, or quite near, the boundaries. At roads' ends there are campgrounds and resorts or guest ranches. From there on travel is by foot or horseback.

One may hike for a day or backpack from one night to a week, camping under spreading spruce or fir trees 'neath the western star spangled skies. Many rent horses and ride in returning each night to their base on the road. Perhaps the most satisfactory way is to cover the country on horseback from one or several base camps.

The best way to see and enjoy the larger wilderness areas in New Mexico, and other western states as well, is to take one of the fifteen or more 11-day Wilderness Trail Ride Trips sponsored annually by The American Forestry Association.

The American Forestry Association provides a good medical officer to take care of any possible sickness or accidents which might, but almost

never do, happen. The AFA also sends its representative along to coordinate and supervise the trip's activities and programs. That's been my job on thirteen of these rides in five states and I've been along full or part time on seven other AFA trips.

Some opponents to wilderness preservation allege that only the rich can afford a wilderness trip. That is pure poppy-cock! The AFA Trail Rides are not expensive, only \$20 to \$22 per day with *everything* furnished. That's about what it costs to stay at any good hotel in the city without horse or wilderness' enchanting environment.

To hike for a day costs nothing; a back-pack trip about \$1.50 per day; a hiking trip with horse transported camp for a party of three about \$3.50 per day each; a "do-it-yourself" horseback pack trip about \$9.00 per

day, and with packer-cook \$14.00.

Opponents of wilderness preservation also claim that that use of wilderness is so limited that its preservation is not justified. A member of the New Mexico Legislature charged in a public meeting that there were less than 3,600 visitors to all of the eighty-three wild, primitive, and wilderness areas in the western states each year. Utterly ridiculous, of course.

For instance, the Forest Service and State Game Department records show that the Pecos Wilderness Area alone received over 8,000 visitors last year. One does not have to be rich nor an experienced rider to enjoy the wilderness areas, and anyone in reasonably good health may do so.

Mention has been made of wild, primitive, and wilderness areas. Perhaps a word of clarification is in order. A wilderness area is a unit of

Veteran Trail Rider, author, forester and campfire storyteller, Elliott Barker swings his mount through the brush in primitive Pecos Wilderness which he loves so well





Elliott Barker escorts Trail Riders through the Pecos wilderness to enjoy the breath-taking scenery of snowcapped peaks and to observe the wildlife, and perhaps do some trout fishing

over 100,000 acres which has been determined to be of true wilderness quality and its boundaries definitely established. A wild area is exactly the same except that its area is less than 100,000 acres. A primitive area is one tentatively established as wilderness pending final determination of its wilderness qualities and suitability for permanent classification as such. Meanwhile, primitive areas are administered exactly the same as wilderness and wild areas.

New Mexico has three wild areas—White Mountain in the Lincoln National Forest, 28,000 acres; San Pedro Parks, 41,000 acres, in the Jemez Division of the Santa Fe National Forest, and Wheeler Peak, 6,000 acres in the Carson National Forest.

Likewise there are three primitive areas—the Blue Range area, 36,000 acres in the Apache National Forest, which extends with additional acreage into Arizona; the Gila, 129,000 acres, and the Black Range, 169,000 acres, in the Gila National Forest.

New Mexico is proud of its two outstanding wilderness areas—the Gila in the Gila National Forest and the Pecos in the Pecos Division of the Santa Fe National Forest with a lap over into the Carson National Forest. The Gila embraces 438,000

acres and the Pecos, 165,000 acres.

For years South Truchas Peak in the Pecos Wilderness Area was considered the state's highest. Then Harold Walter, who for years was New Mexico's foremost mountain climber, scenic photographer and champion of wilderness, challenged the claim and induced the U. S. Geodetic Survey to reappraise the situation. The result was that Wheeler Peak beat South Truchas by 59 feet. Shortly after that Harold Walter's untimely death was a shocking loss to the state, his family and a host of friends. My poem *In Memory* pays tribute to that grand mountain climber and champion of wilderness.

*To him the mountains were sublime
And meant for men like him to climb;
And from their crests survey God's
land.*

*From snow-capped peaks to desert
sand
He photographed their scenic beauty
Both as a hobby and a duty.*

*He sought the charms of wilderness
To ease life's tensions and life's stress,
And strove to save their majesty
For us and for posterity.
The mountains were his shrine, his
altar—
A friend we loved was Harold Walter.*

It certainly is essential that an adequate system of wilderness areas be

preserved for posterity. We speak of a balanced economy as essential to the welfare of the nation. It is no less essential that we provide and preserve balanced recreational resources and facilities. Bathing beaches have their place; national parks have their place; our great coliseums and arenas for games and sports have their place; varied types of resorts have their place; facilities for boating, skiing, etc., are essential; developed and other campgrounds accessible by car surely have their place. *Justly so, wilderness areas, for now and for posterity, have their place in a balanced recreational resource long range program.*

For wilderness there is no substitute, and once destroyed it cannot be restored. The entire national forest wilderness system has 83 units embracing 14 million acres, which is only 8 per cent of the total national forest area. It is essentially the last area of true wilderness quality.

Sponsors of wilderness preservation are often accused of being selfish. Actually, 92 per cent of the national forest area is now available for roads and regulated commercialization, developed campgrounds, summer homes, logging, mining, dam building, etc. Wilderness pro-
(Turn to page 68)



Dr. A. L. Strand

FORESTRY RESEARCH:

He Who Sows, Reaps

By A. L. STRAND

Dr. A. L. Strand retired in August 1961 as president of Oregon State University, a post which he had held for 19 years. Previously president of Montana State College, he is nationally known as an entomologist. He has long been a staunch supporter of forestry and forest research, as well as agriculture and agricultural research.

WHY is there such a wide difference in the amount of money spent for research in forestry as compared with agriculture? So much on agriculture; so little on forestry? To answer this question one must consider the economic history of the U.S. for the past century, our traditions, and our rapidly changing needs. Our attitude toward fundamental resources and the development of a philosophy about them are also concerned.

A hundred years ago forests were in our way. Even less than a hundred years ago in Oregon, forests were burned to make room for farming and livestock. Forests were regarded as unlimited and inexhaustible. They were taken for granted. What was important was to grow wheat and other food prod-

ucts that could be sold for cash. Imagine the consternation of the early wheatgrowers who shipped their product from the Willamette River landings in the 60's and 70's if someone had told them that within three or four generations the forests would bring twice the income of all agriculture to the state of their adoption.

The great economic and political ambition in the U.S. during the 19th century was to conquer the continent. Probably the most important piece of national legislation was the Homestead Act. The great bread basket for us (and the world) was brought under the plow. The axe and the saw were essential tools of the pioneer and the homesteader to build homes or shacks to make life tolerable for carrying on the primary business, which was agriculture. Forests were useful but of secondary importance—even in Michigan, Minnesota, etc., where the early exploiters cashed in on them without a thought for the future.

While these developments were going on, industry in New England, New York, New Jersey and Pennsylvania was growing at a rapid pace and absorbing more and more workers, including many immigrants from Europe. They needed food. The rate of industrial growth was

proportional to the ability of the country to find capital and shift workers, immigrants and natives, from farms to factories and still grow enough food. As late as 1880, eighty per cent of the people were still rural, that is, they were needed in agricultural production to keep themselves and the other 20 per cent in the food and fiber necessary for their well-being. Some people thought there would never be enough food, certainly never a surplus anywhere in the world.

But the middle decades of the 19th century were the most important years the world has ever seen from the standpoint of the future realization of the material comforts and necessities that humans need. Justus von Liebig in Germany laid the groundwork for a scientific agriculture. Chemists like Perkin founded industries. Ingenious mechanics and tinkerers built the machines that industry needed such as the flour mill purifier and a thousand other things. Faraday showed how to get a new source of power to operate them. The potential that was uncovered was enormous. But the literary thinkers of the time such as Emerson looked with horror on what they saw coming. Taking their pitch from Carlyle and Arnold in England, (Turn to page 58)

LIVABILITY UNLIMITED

By IDA SMITH

HERE are still terrestrial frontiers to pioneer, with accent on new frontiers of thought regarding them. Two prominent trail blazers today are Weldon and Phyllis Heald of Tucson. Their modern equipment is camera and typewriter. Their work—acquainting readers with fascinating places and people of the Southwest; and guiding new aspirants through the intricate jungles of creative writing. Both Weldon and Phyllis are creative writers and both are teachers of the art.

"We began writing plays in Pasadena before World War II," says Phyllis. "They were produced in Little Theaters over the country until the war came along. I grew up in the shadow of the theater," she explains. "My father, Ernest Warde, was a director. One of the actors whom he directed was Richard Mansfield, who was my godfather. Then he left the theater for moving pictures, directing such old timers as Dustin Farnum, Ruth Roland, Frank Keenan, J. Warren Kerrigan and many others, until his death in 1920." Phyllis' grandfather, Frederick Warde, was a well-known Shakespearean actor, who brought his own company to Arizona in the 1880's.

During World War II Weldon, a major, served as a climate specialist in the Research Branch of the Quartermaster Corps. His group's work was to ascertain weather conditions and type of clothing and equipment needed on all global fronts. "My most interesting tour of duty," he declares, "was with General George Patton on the Mojave and Colorado deserts. That experience made me a confirmed desert rat, and I decided that I would rather live in the Southwest than anywhere else on earth."

After the war the Healds bought the Flying H Ranch in the Huachuca. Here they worked themselves nearly to death along with nine hired hands. In addition to 8000 acres in cattle, they owned an 800-acre horse ranch and 120 acres of farm land. Both friends and acquaintances flocked to their ranch for recreation.

Near the close of this period Phyllis wrote the article, "Western Hospitality," which sold to *Hollands*, a high-class Texas magazine. After reading the article, the editor added a second title, "The Latch String Is Almost Worn Out." "Incidentally," says Phyllis, "I used my pen name

when I wrote this article."

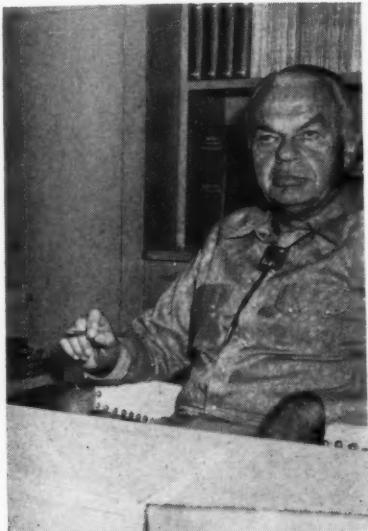
During this time Phyllis managed the ranch so that Weldon could write. His writing was so successful that they sold the Flying H and bought the Painted Canyon Ranch, a non-working ranch in the Chiricahuas. Here both devoted their time to writing, selling to countless nationally-known magazines. Among these were many of Weldon's articles on mountains and national parks, illustrated with photographs which he took while exploring the areas.

In 1955 the Healds decided they needed still more privacy if they were to make writing a full-time job. Painted Canyon Ranch was a

Phyllis and Weldon Heald take time out from all their writing activities to pose for the camera in the living room of their Tucson, Arizona, home



**To Phyllis and Weldon
Heald, the relaxing
and invigorating
climate of the Southwest
is "Livability
Unlimited"**



Weldon Heald's hobby is collecting books related to his work. He has one of the largest private collections on mountaineering in the world



The Healds, lovers of animal life, have in addition to the collie, two pet cats, "Barney" and "Whitney," who don't seem to pay any attention to their "fine feathered friends" in the Healds' backyard bird sanctuary

Photos by Moulton B. Smith



The warm southwestern sunshine and relaxing patio make outdoor living a healthy and delightful change from writing jobs

natural for bird and nature lovers, and vacation-bound guests. All of these were delightful, but difficult to combine with writing schedules. So they sold the ranch to the American Museum of Natural History for a southwestern research station, and bought a home in Tucson.

Today both pursue writing and photography careers and each has clients in manuscript criticism. Phyllis is a writer of both fiction and nonfiction. For the past ten years they have conducted the Annual Southwest Writers' Workshop and Conference at Arizona State College in Flagstaff, and jointly hold classes in creative writing in Tucson, Phoenix, Coolidge, Bisbee and Douglas.

Phyllis is a full-fledged book doctor. During 1960 she edited seventeen books, three of which have been published at this writing. She has clients all over the U. S. and one in Uruguay. Her work as literary critic and agent has increased so that she now confines most of her own writing to assignments. As a book doctor she also does some ghost writing.

Weldon graduated from M.I.T. an architect. Perhaps that's one reason the ideas he constructs with words have such impact. Collaborating with Joseph Wampler, he wrote half the book, *High Sierra, Mountain Wonderland*, and the flowers and plants chapters of "Ha-

vasu Canyon." During this time he suffered a leg injury and was hospitalized. In Wampler's eagerness to have the books completed he kept urging Weldon to get well. "You don't write with your leg!" he reminded facetiously.

Another, "Inverted Mountains" was written in collaboration with Dr. Edwin McKee. All were part of the American Mountain series. Currently he is working on the new state Scenic Guide series, published by H. Cyril Johnson. They will include all eleven far-western states. In addition he is writing the prefaces to "Who Is Who" in all the states as they come out; and his continuous magazine articles. "I am



The Healds take pride in caring for and maintaining their front yard which is natural desert and contains a number of rare desert plants

particularly interested," he says, "in the preservation of certain of our natural areas, for instance such magnificent spots as the proposed Great Basin National Park of Nevada." Due to his outstanding work along conservation lines his name is listed in the 1960 "Who's Who In The West."

Weldon is a trustee of the National Parks Association, vice-president of Great Basin National Park Association, past director of Sierra

Club, vice-president, American Alpine Club and member of Explorers' Club.

Both Weldon and Phyllis are life members of Theatre Americana and Arizona Association for the Preservation of Historical Landmarks. Phyllis is active in the Arizona Press Women.

"Writing is a lonely occupation," Raymond Spears once said. "One sits at his typewriter. He enters a jungle. He blazes a new trail. When

he is through his readers find an open highway—probably with faint idea of the writer's toil, adventure, weariness."

But there is an allure to trail blazing, regardless of the hard work. The Healds, with camera and typewriter bring the grandeur of the mountains, the mystery of the desert, with the need of preserving their natural beauty, and the warmth of outstanding personalities, as close to us as our doorstep.



Phyllis Heald, whose hobby is collecting rare statues of crystal animals, has her own private office and library



After 100 years of timber production, the rugged Allagash woodlands remain a scenic wilderness

THE ALLAGASH woodlands in northern Maine offer a rugged and unique experience in outdoor living. Even after a century of commercial timber production, the Allagash River remains an unspoiled scenic wilderness.

Hundreds have thrilled to canoeing on the white waters of the Allagash River. Countless others have come to enjoy the wilderness peace and quiet. International Paper, one of the industrial custodians of the Allagash woodlands, welcomes

these visitors. We have long recognized that, to many Americans, the nation's forest acres represent the opportunity to enjoy recreational and spiritual values found only in nature.

To make certain the Allagash woodlands are serving the needs of our neighbors, International Paper and other private landowners in the area are continually planning and working with conservation, wildlife and recreation agencies in the state of Maine. And, by regulating

cutting along the shores of lakes and rivers, we are preserving the beauty and appeal of this wilderness for the enjoyment of future generations.

It is our policy in the Allagash, as elsewhere, to provide the maximum output of forest products, to improve the functions of these lands as watershed and wildlife habitat, and to offer the greatest opportunity to everyone for the full enjoyment of these unmatched recreational resources. We call this multiple use.



INTERNATIONAL PAPER

New York 17, N.Y.

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TD-15 Skid-Grapple replaces two ...unloads, decks, and sorts 150

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Then this Skid-Grapple works a second shift, sorting and decking sugar pine, ponderosa, douglas fir, and white fir. When it shuts down at midnight, the mill is ready for next day's sawing!

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Beavers Vs. Big Dams

(From page 23)

ed to serve as a flood control operation, and as a gigantic means of keeping silt out of the Rio Grande River forty miles to the south, both highly laudable objectives, to be sure. Some seven miles of road, most of it unnecessary, have been built in connection with relocating the original highway, parts of which would be flooded if ever the dam should fill, an admittedly remote possibility because of the need for water supply in the river below, for irrigation and other essential purposes. This road, also built at tremendous cost, bisects the ranch; and the damage done to the landscape by the heavy road building equipment, by blasting and other construction activities is practically irreparable.

The dam is being hailed by many citizens as a wonderful thing. It makes temporary work for people, as does the road which, to be sure, also provides citizens who can't walk with a fine view of the truly beautiful ranch scenery by bringing the public close to the colorful cliffs instead of forcing them to view these scenic splendors from a distance. It also offers a most substantial pork barrel, as does the dam.

But there are some who do not hail all of this "improvement" with so much enthusiasm, and I am one of these. Yes, there are indeed two sides to this affair. This is where the beaver come in. If those who advocate the big dam with such urgency have the privilege of speaking out against those who oppose the projects, then the opposition should also have the right to state their side of the issue as many have, no matter how ineffectually.

Long, long ago, thousands of provident beaver created thousands of ponds which held millions of acres of top soil—held it up on the mountain watersheds where it belonged—prevented it from constantly flowing downstream to join small rivers, then large ones, and so on. These small dams also controlled floods by permitting high waters to descend more slowly, from one beaver dam system to another so that, when the water reached the rivers, it was much tamed and posed little threat of devastating floods. Millions of acres of arable soil in the Rocky Mountain West are directly related to the work of beaver in their successful efforts to build watery homesites. Beaver

meadows, some now included in farming sections, are lush, plant-growing areas which would not exist had it not been for the centuries of tireless dam-building activity.

By no manner of means are we suggesting that old days can ever return when beaver can play a major part in this upstream watershed protection job. However, they certainly do point the way, as we have attempted to indicate in our Beaver Museum. As a matter of fact, with far less funds than the big dams cost, and with less destruction to the land, better days than the old beaver ones could be brought to our once fair country if only those who vote the funds in Congress could be encouraged to see the light. It is a light which could be very bright.

Here is what the huge dams actually accomplish: They receive priceless, irreplaceable topsoil from all the higher places, countless tons of a material, that under certain conditions could be as valuable as gold. The dams receive it and bury it beneath water. When we ask, "What will you do when the dams are filled with soil to the top?" the answer is, "We'll build another dam downstream."

What do smaller dams, placed at strategic spots upon the watershed, do? They maintain soil near its source and keep it out of the larger streams. They prevent floods at the source and are of inestimable value to wildlife, forests and other natural entities.

The beaver is the greatest altruist among mammals. By building his ponds he provides homes, food, and preferred ecological surroundings for countless birds, mammals, and fish. He raises the water table and thus is of great benefit to plants—far repaying, in this way alone, the damage he sometimes creates by felling certain trees. When he leaves an area, the plantlife has been much enriched because of increased soil values. Furthermore, in these days of land management, beaver can be moved from place to place and prevented from what may nowadays be considered damaging traits.

If beaver can create these benefits—man can do the job as well or better. Smaller dams or similar forms of stream control can be installed wherever needed. Research has shown, beyond the shadow of a

doubt, that these small water holders can be constructed in a way which will accomplish a far more valuable end than will the huge stream-choking soil reservoirs now under construction in many places. If only funds, now spent by the Corps of Army Engineers, could be allocated to more appropriate agencies, and effort directed toward the little, as well as the big, our whole country would benefit for years to come. Once again, please do not misinterpret what I have to say. Some of my most revered friends are generals.

We are perfectly aware that some large, multi-purpose dams are essential, such as the Hoover and others of this type. We are not considering these structures here. What we are concerned about are dams such as the one at Abiquiu, New Mexico, which will prevent rather than help the land to make a comeback after years of hopeless overgrazing by sheep and cattle on the watersheds above the Chama River which runs red with the soil that should never have reached it in the first place and which, today, could still be prevented from reaching it if only small dams had been substituted for the large one.

Located as we are on the boundaries of the great Carson National Forest, with the Santa Fe National Forest across the road as it were, we are naturally much interested in the welfare of these and other tracts of publicly owned lands. It has been obvious to us for years that the growing population of America must use these areas increasingly for many purposes; for lumbering, recreation, aesthetic enjoyment, and a host of other purposes. Always we have admired the hard work of the men who manage these forests, with a minimum budget and a maximum of devotion to their practically endless tasks, often with slight public appreciation along with it.

Perhaps the fact that many of our national forests represent almost the last "safe" home of the beaver, outside of the national parks, has something to do with this active interest of mine. In any event, I have long wanted to have a part in a "living" demonstration which would inform the public of the many uses of the national forest in such a manner that the presentation would be comprehensive—with the various uses "bal-

anced" so that the educational displays would not favor one group of users over another.

We have been most fortunate at the Ghost Ranch Museum to have such an exposition, now well toward completion. In fact, when finished, it will surpass our fondest dreams with the scope of its exhibits. For this and for so many other reasons, we are indebted to the Forest Service itself. With amazingly little cost but with a great deal of expert planning and savvy, the Service has designed and installed this acre and a half demonstration upon our museum grounds. The exposition is now known as "Beaver National Forest," the smallest but one of the most interesting national forests in the country. The reason for the name will become apparent shortly.

You see, there will be a mechanical beaver, located beneath a ramada. This waterproof creation will have a sound-producing machine where its vitals would ordinarily be if it were a live beaver. When a button is pushed, this handmade beaver will sit up, face his audience and, in the same voice that Smokey Bear employs, will proceed to describe and interpret the exposition. He will commence by saying, "Welcome to Beaver National Forest!" Then he will continue, "The scene before you represents a national forest, from plain to mountain top. See the open area on the right where cattle are grazing on a carefully managed range. Look up into the high country on your left; you can see sheep feeding among the firs and aspens. Listen and you can hear them!"

At this point a concealed loud speaker will issue forth with the sound of both sheep and of cattle. It was decided to use a separate speaker for this and other "sound effects" because some of the visitors might possibly consider it strange to hear the beaver bleat like a sheep or moo like a cow. Also, there will be several musical interludes to separate the subject matter spoken by the beaver. It would, no doubt, seem odd to hear the strains of the New York Philharmonic Orchestra issuing from a beaver's mouth. Beaver are accomplished animals, but this would be taxing their abilities a little too much.

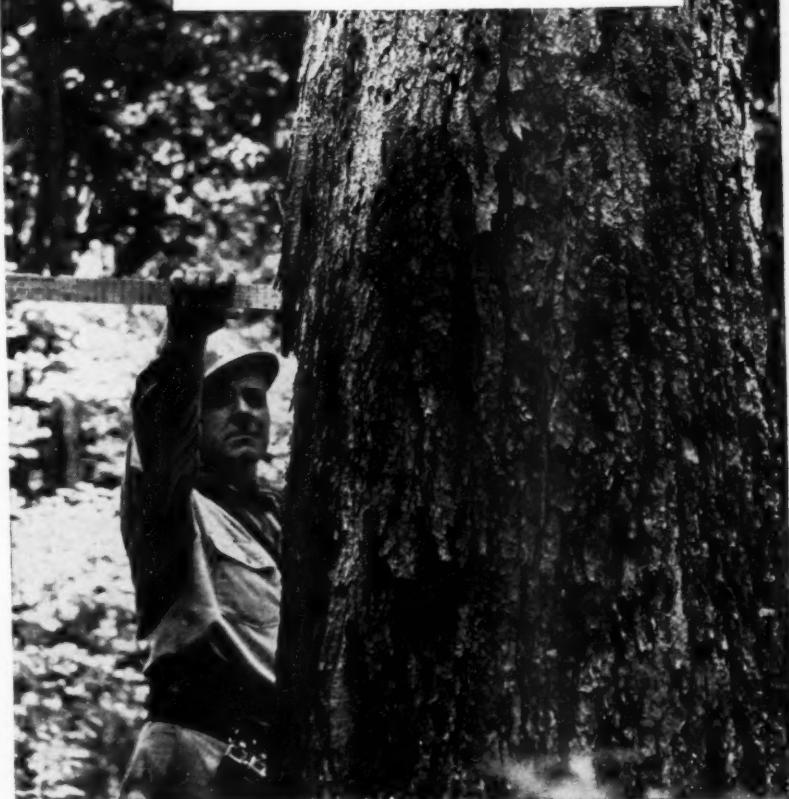
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side of a truly realistic brook which flows from the "mountain top" to the grazing "plains" where smaller trees such as piñon, juniper, and shrubs flourish.

Built to conform with the height of the trees (on the same scale) are weatherproof models of sheep, cattle, and people. There are lumbermen, picnickers, a fisherman, a fawn and her mother, a turkey and, of course, in a small "beaver pond" which slows the brook at once place, another model beaver with his head showing above the water. The mechanical beaver refers to all of these models in his "talk" and tells how various national forest uses are made possible. At one point, the "beaver" lapses into Spanish for the benefit of our Spanish-speaking neighbors in the surrounding community, who are our most frequent and appreciative visitors. After all, long before the Anglos came to New Mexico, the beaver probably did speak Spanish.

There are other fields of action our Beaver Museum tries to serve, namely, those of art and history. One cannot overlook these fields in considering a rounded presentation of the beaver story. In a small gallery, euphemistically called "The Print Room," there is perhaps as complete a display of prints, figurines and other forms of art, all of beaver, as one may find anywhere. The collection includes some eighty lively etchings, drawings, and colored representations made over a period of three hundred years. Audubon's fine colored elephant portfolio print, as well as his smaller one, are prominently displayed. Some grotesque, amusing delineations of the animal and his homes, made in the sixteen and seventeen hundreds, are of special delight to visitors. There are many more prints in storage waiting their turn to be shown. There is not enough wall space for all of them to be exhibited at one time.

The historical section presents a story of the mountain men who came to New Mexico in pursuit of beaver skins early in the last century. There is special reference to Kit Carson of nearby Taos, the great trapper-guide and Indian scout of this region. Several other mountain men are included—the true first Anglo explorers of the West and Southwest. Many of these stalwarts, who might be called "controversial" by some, were the first to part the bushes in our vicinity in their never-ending search for the soft, brown, warm furs of the creature who preceded them by endless centuries.

Possibly no more exciting adventures were ever experienced in the entire Rocky Mountain and Plains region than by these men. The exploits and accomplishments of these oft-called "paleface" trappers spelled the true opening of the West. I have often thought that about the only time they could truly be called "palefaces" was after their scalps had been lifted by Indians who had learned this unhappy custom from the whites in the first place and were only trying to demonstrate their proficiency in the art.

As the years go by, we hope to make our American Beaver Museum mean more things to more people. There was a time when beaver were almost all things to many people, truly a multiple use and multiple interest animal. The other day we listened while a rancher visitor to the Beaver Museum, on observing a beautifully mounted plainly labeled beaver skeleton, said to his small son, "See! That's a small dinosaur!"

We stepped into the breach and explained that while we did have dinosaur skeletons in our main museum building, the beaver bones were not of that great age. This led to a discussion of the fact that Ghost Ranch is world-famous for a rare type of dinosaur, first discovered by an expedition from the American Museum of Natural History in 1947, and for the remains of other dinosaurs as well.

The boy asked, "Did dinosaurs build dams, too?"

"No," answered the father. "There was plenty of water around when dinosaurs were here; too much water and too much mud. That's where dinosaurs are today; stuck in the mud. I wish there were that much water today!"

Then, turning to me, he asked, "Are you sure this skeleton isn't a little dinosaur, after all?"

We said, "Yes, we are sure," and let it go at that.

We, too, wished there were more water in our time and smaller dams instead of big ones to hold it.

The Beaver Museum and the U.S. Forest Service Exposition will be officially opened to the public when members of The American Forestry Association visit Ghost Ranch October 3, 1961, in connection with their attendance at the Annual Meeting in Santa Fe. This is a ranch with prairie dogs, antelope and coyotes and no cyanide guns.

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Weeks Act 50th Anniversary

The 50th anniversary of the passage of the Weeks Act, the beginning of active federal-state cooperation in forest fire control and acquisition of national forests east of the Mississippi River, is being celebrated in September and October.

On Sept. 26, Secretary of Agriculture Orville Freeman was scheduled to make the principal address at a program by Gov. Terry Sanford, of North Carolina, at Asheville. The program coincides with the annual meeting of the North Carolina Forestry Association. Other speakers will be Voit Gilmore, director of the U.S. Travel Service, and Dr. R. E. McArdle, chief of the Forest Service.

Another Weeks program is scheduled for Oct. 6 and 7 at the Crawford House in the White Mountains of New Hampshire. The program is sponsored by the Society for the Protection of New Hampshire Forests, the Forest Service, and the Appalachian Mountain Club. Speakers will include Sherman Adams, former Governor of New Hampshire and assistant to former President Eisenhower; Edgar C. Hirst, first state forester of New Hampshire; Charles W. Blood, of the Appalachian Mountain Club; and Dr. McArdle.

Keynote speaker will be the Hon. Sinclair Weeks, whose father, Senator Weeks, secured passage of the bill.



Daniel B. Beard



Carlos S. Whiting

Udall Nominates Daniel B. Beard Promotes Carlos S. Whiting

Secretary of the Interior Udall approved the nomination of Daniel B. Beard of the National Park Service to be a NPS Assistant Director in charge of a newly-created public affairs section.

Beard has served as the Chief of the National Park Service Division of Interpretation since November 1959, and has directed NPS educational and interpretive programs.

Widely known as a naturalist, writer and artist, Beard follows in the footsteps of his internationally famous father, Daniel Carter Beard, naturalist and one of the founders of the Boy Scout movement in America. A graduate of Syracuse University majoring in biology and zoology, he joined the National Park Service in 1934 and has served as superintendent of the Everglades National Park, the Dinosaur Nation-

al Monument, and the Olympic National Park.

Beard will have under his direction the divisions of information, special programs, graphic arts and photography, publications and international cooperation.

In a shift in the Department of Interior's information organization, Carlos S. Whiting was promoted to Chief of Press Relations for the National Park Service.

Whiting, a journalism graduate of the University of Minnesota in 1947, entered government service in 1949 as information specialist in the Fish and Wildlife Service. He subsequently served in information posts with the Bureau of Land Management and Bureau of Reclamation before joining the National Park Service as assistant chief of information in 1959.



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Forest Forum

(From page 6)

United States Forest Service land, 15,000 acres state-owned land and the remaining acreage in private ownership. In view of the United States Department of Agriculture endorsing H.R. 5712 and the small amount of national forest land involved in relation thereto, I cannot comprehend Mr. Pomeroy's reference to "overlapping of authority on national forest land."

Furthermore, I endorse the recognition that S.543, 87th Congress, First Session, gives both coastal and inland shoreline resources equal status. Certainly those persons residing in the interior of our country are entitled to the same treatment as those living on the sea-coasts in this vital matter of preservation.

Joseph Jaeger, Jr.
Director of Parks
Missouri State Park Board
Jefferson City, Mo.

Protest Entered

EDITOR:

I have just returned from a very interesting trip in the Yukon and so was delayed reading your August issue. May I enter a protest to Kenneth Pomeroy's obviously superficial statement, putting the AFA on record as opposing the Ozark Rivers National Monument. Has Mr. Pomeroy ever made a study of this area that enables him to state it does not measure up to standards established for national parks and monuments? I did make such a study. I showed a film on the Current River country at these hearings to both the Senate and House committees which I believe prove conclusively that the area does measure up. Moreover, where did Mr. Pomeroy get his information that the creation of this monument would mean an overlapping of authority on national forest land? Of the 113,000 acres contemplated for the monument, something less than 4,000 acres containing very little timber and one or two picnic areas are operated by the Forest Service.

I cannot believe that it has become the policy of The American Forestry Association to recommend that the U.S. Forest Service go into the business of purchasing for administration, large tracts of land which are fitted only for recreational use. It seems to me that in this instance Mr. Pomeroy may have been influenced by large Missouri timberland owners who are interested in keeping this area open to exploitation.

Leonard Hall
Possum Trot Farm
Caledonia, Missouri

(The protests by Mr. Jaeger and Mr. Hall represent only two of the Missouri comments received in reference to the Current River proposals. It is the intention of *American Forests* to present all of these views, pro and con, in so far as possible. It should be pointed out that many foresters in AFA, including Mr. Pomeroy, are concerned by a spreading tendency, of which the Current River program is a part, to convert timber-growing areas to parks. In enacting the Wilderness Bill (see page 6) Senator Humphrey challenged foresters to keep the timber cutters away from the wilderness door by doing an outstanding management job on other lands. This the foresters pro-

THE OZARK RIVERS NATIONAL MONUMENT:

Harmonious but Separate

Missourians are concerned for the economic development of the Ozark region, and they also are concerned for the safeguarding of the Ozark rivers. Both are proper concerns, and to some extent they go hand in hand. Yet it is necessary to avoid confusion, especially when specific legislation such as the Ozark Rivers National Monument bill is concerned.

The development of the region—the watersheds of the rivers—is a multi-purpose undertaking. Its most promising objective may be the development of a forest industry—timbering, pulp-making and the like. It also involves farming, dairying, mining, water-power development, tourism and all other activities suitable to the area. Of course, it involves the conservation and use of water, soil and other natural resources.

One of the most useful agencies on behalf of this multiple-use program is the Department of Agriculture's Forest Service. It is in charge of the Clark and Mark Twain National Forests. In them, supervised timbering and other activities are encouraged. Missourians are grateful for the Forest Service.

The preservation of the Current, Jacks Fork and Eleven Point Rivers and their banks in their semi-wild state is another matter. Missouri properly has asked the National Park Service to carry out this function. As a result, the Symington-

Long-Ichord bill for the creation of the Ozark Rivers National Monument is pending in Congress. The bill's primary object is the conservation and enjoyment of scenic beauty. It would authorize the Park Service to acquire narrow strips of land along the rivers—in addition to the larger Cardareva section with its springs, caves and sinks—and to manage these, in general, as other national parks are managed. This is a single-purpose mandate.

It is, however, in harmony with the broader purposes of area development. Commercial activities would be restricted only on a fringe of riverbank. The relatively small acreage involved would not handicap general economic development. On the contrary, a park would stimulate the business of providing accommodations beyond its borders.

Like the Forest Service and the various state agencies concerned, the Park Service people are conservationists. They can be counted on to be sympathetic and co-operative in regional development. Being charged with guarding the rivers against unwarranted exploitation does not at all mean that their work would be a barrier to overall development. Nor does it follow that the Park Service job might as well be turned over to the Forest Service. The work of the two is harmonious, but each has a specialized task.

St. Louis Post-Dispatch
Aug. 22, 1961

pose to do but their question is just where does this nationwide conversion of land stop? From the standpoint of AFA, it becomes increasingly difficult to urge land-owners to practice forestry with the state indicating it may take their forest land away from them for other purposes.—Editor)

West Wins a Convert

EDITOR:

I have just returned from a trip West that included the High Uintas Trail Ride in Utah. It was a beautiful ride through country far more interesting and rugged than I had expected. I could never describe the breath-taking, magnificent view from Thompson's Ridge, but I know that none of us who were there will ever forget the thrill of it, a thrill enhanced by the fact that there was not a single other person or sign of civilization in sight.

The Davises are certainly wonderful outfitters. They are very efficient and well organized and they show a friendly interest in seeing that everyone is having a good time. The convenience and comfort of the riders were always well provided for. The good food was prepared and served by very per-

sonable crew members. There were always interesting things planned for layover days. In many ways it was a most pleasantly memorable Trail Ride.

During the next school year I am going to be teaching in Colorado Springs. My address from September 1, will be: 1238 Wood Street, Apartment B, Colorado Springs, Colorado. My decision to move West was greatly influenced by my experiences as a Trail Rider. After each trip I had a strong desire to remain in the West and get to know it more thoroughly, so next year I'll be doing just that. I know it is going to be a wonderful year.

Marjorie E. Burdette
4714 Oak Terrace
Merchantville 8, N. J.

Pen Pal Wanted

EDITOR:

I would certainly like to hear from any persons interested in forestry and who would like to correspond with a young man dedicated to the preservation and wise use of our natural resources. Thank you again.

Dale L. Walker
2172 Magnolia Drive
Simi, California

As One Commander to Another**EDITOR:**

The American Forestry Association and AMERICAN FORESTS, in my opinion, deserves rebuttal of the recent letter to the Editor by Henry M. Weber, M.D. Commander, USN-Ret., appearing in the July issue of AMERICAN FORESTS and entitled, "OPPOSES 'MULTIPLE USE.'"

Dr. Weber speaks as an M.D. I speak as a practicing forester, professional forester if you prefer the term. However we can both speak as Naval Commanders. Possibly we can reach common ground there.

Better to establish that common ground let me remind Dr. Weber that he is criticising a profession outside his own. He, of course, has a perfect right to do that. However, along with professionalism goes responsibility. Here I think Dr. Weber has been remiss. As an example, I, as a forester, may question a medical diagnosis. However common sense and propriety, or the sophisticated term, professional responsibility, tells me to get another medical opinion. Certainly not accurately to accept my own opinion on a matter in which I am not professional.

It appears that Dr. Weber, in a comparable situation, has done just that. The result is that certain of Dr. Weber's statements manifest his misunderstanding. His interpretation of the concept of multiple use is certainly erroneous. His historical analogy is quite faulty. I think he fails to understand the whole meaning of the people he quotes.

AMERICAN FORESTS is not a journal. It is not only professional. Particularly because of its wide scope, it is open to criticism. I have criticised it. I have been shown to be wrong in some cases. I think I am right in other cases. I would guess that other



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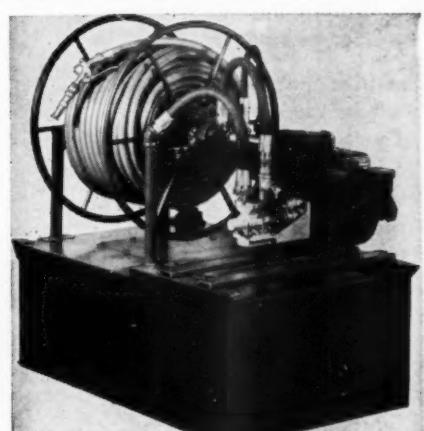
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foresters, much wiser than I, criticise the magazine upon occasion. I would doubt if even the Board of Directors are in unanimous agreement on every position that The American Forestry Association takes. That is as it should be. As a professional forester I think that The American Forestry Association through AMERICAN FORESTS is doing a fine job in carrying out its designed purpose. It no more "looks more and more like a fish and game journal every day," as Dr. Weber says, than it is "only a spokesman for the Forest Service," as other people say.

I am sure, Dr. Weber, that as Naval Commanders we have both been criticised. I am sure too, at least in my case, that some of that criticism has been well founded. However, I know too that some of that criticism has been irresponsible because it was not grounded in complete fact or tended objectively.

If you will ponder on that analogy a bit, Dr. Weber, I'm sure you will agree that The American Forestry Association, as voiced by AMERICAN FORESTS, is something much bigger, something much more professionally responsible than you have pictured it.

Jack Taylor, Forester
P.O. Box #439
Covelo, California

Too Many Cranberries

EDITOR:

Several months ago I read John F. Preston's article in AMERICAN FORESTS entitled "The Back Trail" and enjoyed it very much.

At that time I thought the friendly moose had eaten too many cranberries, but your July issue straightened me out.

R. E. Haynes
Timberlands Division
West Virginia Pulp and Paper
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In Defense of Mr. Kitchin

EDITOR:

I read with chagrin and disappointment the letter written by professional forester Marshall D. Murray to "Forest Forum" regarding William Kitchin's article.

Mr. Murray displays a completely unprofessional and inept approach to the skilled art of forestry. Tearing down and attempting to degrade a young man's approach to what could be another successful way to improve and preserve our forests for all time is debasing himself.

For all Mr. Murray's writing he offers not a bit of a suggestion nor any information of value. Further, he quotes statistics and most probably a particular year that tends to establish his point. However, he ignores some facets that are important, such as:

1. Fires caused by man are preventable and needless.

2. Statistics do not include the direct and indirect influences the after effects of a fire have on the forests. These involve an increase of insects and the potential damage to adjacent forests; the effect of water runoff and soil erosion to the forest area, wildlife, agriculture, and man.

3. The type of forest that will replace the burned area. Will it be the same type, quality, and have the same production capability as before?

4. The unbalance of nature caused by the inroads of progress—roads, cities, industries, farms, harvesting methods, insect sprays, pollution, etc. We accept much of this as necessary; however, it does have its influence even on forest production.

Mr. Murray was quick to pick out and pick apart small phrases of Mr. Kitchin's article. This is not proper, as he then uses

these phrases to construe the meaning he wants which often is not the same as that intended by the author. For example, take Mr. Murray's entire sentence, "Fire plays a very small role in this destruction." A flat statement as such is a complete display of ignorance. Anytime fires cause enough destruction in one year to cover an area as large (or small) as Rhode Island, it is not a small role. Now the insects may cause more damage but that in no way makes the destruction by fire a bit player.

My suggestion for the professional foresters and Mr. Murray in particular is this: Work on the part of forestry that will produce the best results the quickest. Look back at our history and see what caused our biggest troubles. There you will find man. If you can correct his ways—undo his damage—and have him properly care for and manage the forests, they will be everlasting in beauty and production.

More forest production is lost through fires and mismanagement (particularly of private woodlands) than by insects. I have reference to true production. It is also an accepted fact that normally insects attack plants and trees that are weakened or injured. Drought, wind, soil erosion, small fire damage, logging, improper handling of slash, thinning, hail, or snow damage could all contribute to a weakened tree. Actually, in the long run (about 100 years) the tree that is destroyed by insects or disease never may have lived or grown or been able to produce quality timber. These weaknesses may not be readily apparent to man, but the insect or disease hastens its removal from the living to return it to the soil as humus where it contributes to the growth of a healthy tree.

I suggest that Mr. Murray have a more positive approach, particularly referencing his statement, "Forestry problems will be solved by the efforts of professional foresters . . ." He must realize that other persons, professional and layman alike, have much to contribute to solving the problems of forestry and to the benefit of humanity. I can say without reservation that it is obvious that all professional foresters working together can solve all the forestry problems only with "outside" help.

John B. Buschmann
Layman Forester,
Horticulturist and Farmer
and Active Conservationist
P. O. Box 1006
Williams AFB, Ariz.

Wilderness Armies

EDITOR:

Cheers for Olga Huggett of Port Ludlow, Washington! I believe "How Wild the Wilderness" by Arnold P. Snyder (May, 1961 American Forests) should be reread along with the letter from Port Ludlow (August, 1961 American Forests).

To me, wilderness preservation, (human nature being what it is) seems a will-o-the-wisp, a fine theory on paper, but impossible to accomplish.

As for Trail Riders, I do believe Olga Huggett might have differentiated between the AFA Trail Riders in limited parties, as compared with the trail rider wilderness "armies" and all their litter, described in Mr. Snyder's article. However, I do agree that a carpet of pine needles makes a much more enjoyable hiking trail than manure mingled with mud and the shattered remains of the natural woodland cover.

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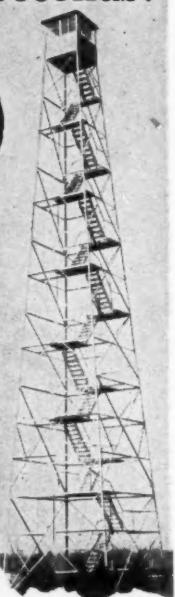
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AFA's Role In Forest Land Use

(From page 15)

ages of "famine proportions," and were perplexed by the prevalence of what they regarded as "forest devastation," urgently and earnestly advocated federal control of timber cutting. They believed in and earnestly sought to achieve a general practice of forestry through the compulsions of law. Others with equal earnestness sought the same objectives of sustained forest production by a different route — namely, through public and private cooperation, to encourage private forestry practice through the gradual development of appropriate economic incentives. Theirs is the background of the system of "tree farms" with which American Forest Products Industries has been so long, so prominently, and so usefully identified.

The American Forestry Association never took sides in the so-called "political wars" which to some extent divided forestry and forest industry over a quarter century. But it staunchly supported a succession of constructive steps which today may be said to constitute our national forest policy founded on deliberate and informed public and private cooperation.

Among the milestones which have marked the progress of American forestry during the past half century are:

1. The building up of the U. S. Forest Service and the various agencies of the Department of the Interior dealing with forest lands.

2. The Weeks Law of 1909 as a means of building up a nation wide and diversified system of national forests.

3. The Clarke-McNary Act of 1923, the foundation of our vast system of forest protection through federal, state, and private cooperation.

4. The McSweeney-McNary Forestry Research Act of 1928.

5. The initiation in 1927 of an unprecedented nation wide campaign to promote the use of forest products based on a campaign slogan: "Wood—Use it; Nature Renews it," which in an important sense was a prelude to the present great wood promotion campaign under the auspices of the National Lumber Manufacturers Association.

6. The establishment in 1932 of American Forest Products Industries, Inc., with its declared first objective: "To perpetuate the forest industries"—a sort of defiance of the

Great Depression in the depths of which all industry was then floundering.

7. The Forest Conservation Code —often referred to as Article 10 of the Lumber and Timber Products Code—under the National Industrial Recovery Act, submitted to the President with these ten words: "This is an industry undertaking; it will be so administered," and approved by him in 1933; a foundation of much of the industrial forestry progress since that time.

8. The enactment in 1943 of the so-called "Bailey Amendment" to the Internal Revenue Code, under which increases in timber growth and timber value may be taxed as "capital gains" at a relatively low rate, rather than as "ordinary income" at relatively high rates. Probably no single action during the past half century has added more incentive to private forestry and to permanent forest industry than this simple amendment to the federal tax law 18 years ago.

9. Initiation in 1941 of the American Tree Farms movement, which from small beginnings in Washington in 1940 and Alabama in 1941 has become the most significant private forestry movement in this generation. Since 1942 it has been mobilized, with the help of federal and state forest agencies, under the auspices of American Forest Products Industries, Inc.; and since 1943 has had massive support from the pulp and paper industry—one of the "miracle" industries of the post-war period.

10. The declaration by Act of Congress in 1960, of the principle of "multiple use" as the guiding objective in the administration of our national forests; and the growing awareness, among private forest owners, of the public good-will value, in the administration of privately owned forests, of similar guiding objectives insofar as these are not incompatible with the primary economic purposes of permanent private investment in forest production.

Few, if any, of these forward forestry movements during the past fifty years have been initiated by The American Forestry Association. But all of them, to my knowledge, have had the association's staunch support. In all these instances the support of The American Forestry

Association has been constructive and helpful. In some it has been decisive; and the public has been the gainer.

In 1953 under the auspices of The American Forestry Association, a noteworthy forestry conference was held at Higgins Lake, Michigan, for the formulation of a proposed statement of national forestry objectives and policies. This statement was overwhelmingly approved by referendum among its thousands of members. Later in 1953 it was endorsed in a gigantic forestry convocation in Washington, D. C. Since then it has been, so-to-speak, the association's *Bible*. It may perhaps be summarized in these three major objectives:

1. Effective protection of our forests—nation wide—against fire, insects, and diseases.

2. Provision of continuous timber production adequate to the nation's uses in peace and war, with sufficient margin of surplus to maintain permanently in America national economy of forest abundance.

3. Mobilization, amongst forest land in private ownership and public ownership alike, of the maximum of feasible uses for watershed protection, forage, wildlife habitat, recreation, and public health and scenic values.

These objectives, except in their phraseology, are not much different from the declared objectives of The American Forestry Association 80 years ago. But the context is vastly different. Forestry then was an idea—with little public understanding and less public acceptance. Today it is a solid performance with promise of greater things to come. The voice which then "cried in the wilderness" today has millions of listening ears. Forestry has been taken out of the books and put in the woods. Forest conservation is no longer an idea only. It is a firmly established business. The American Forestry Association, as a voice of nation wide citizen interest, has a great backlog of influential business.

I was the first president of American Forest Products Industries during the deep depression years when it was seeking to establish a firm footing in a group of disconsolate industries which then were more concerned about present survival than about future opportunity. I, too, am grateful for the great contribution which during the past quarter century, it has made to forest conservation, permanent forest industry, and the public good.

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He Who Sows, Reaps

(From Page 39)

they deplored the development of industry with its smoke and dirt. Their ideas were quite in harmony with the old moral philosophy that obtained along the Eastern Seaboard in the 18th and much of the 19th centuries—that the good life was rural, city life, corrupt. The future of the country, they said, depended on the moral fiber of rural America. The agricultural societies were important in fostering the idea. They contained in their membership during the 18th century the most prominent aristocrats of the time.

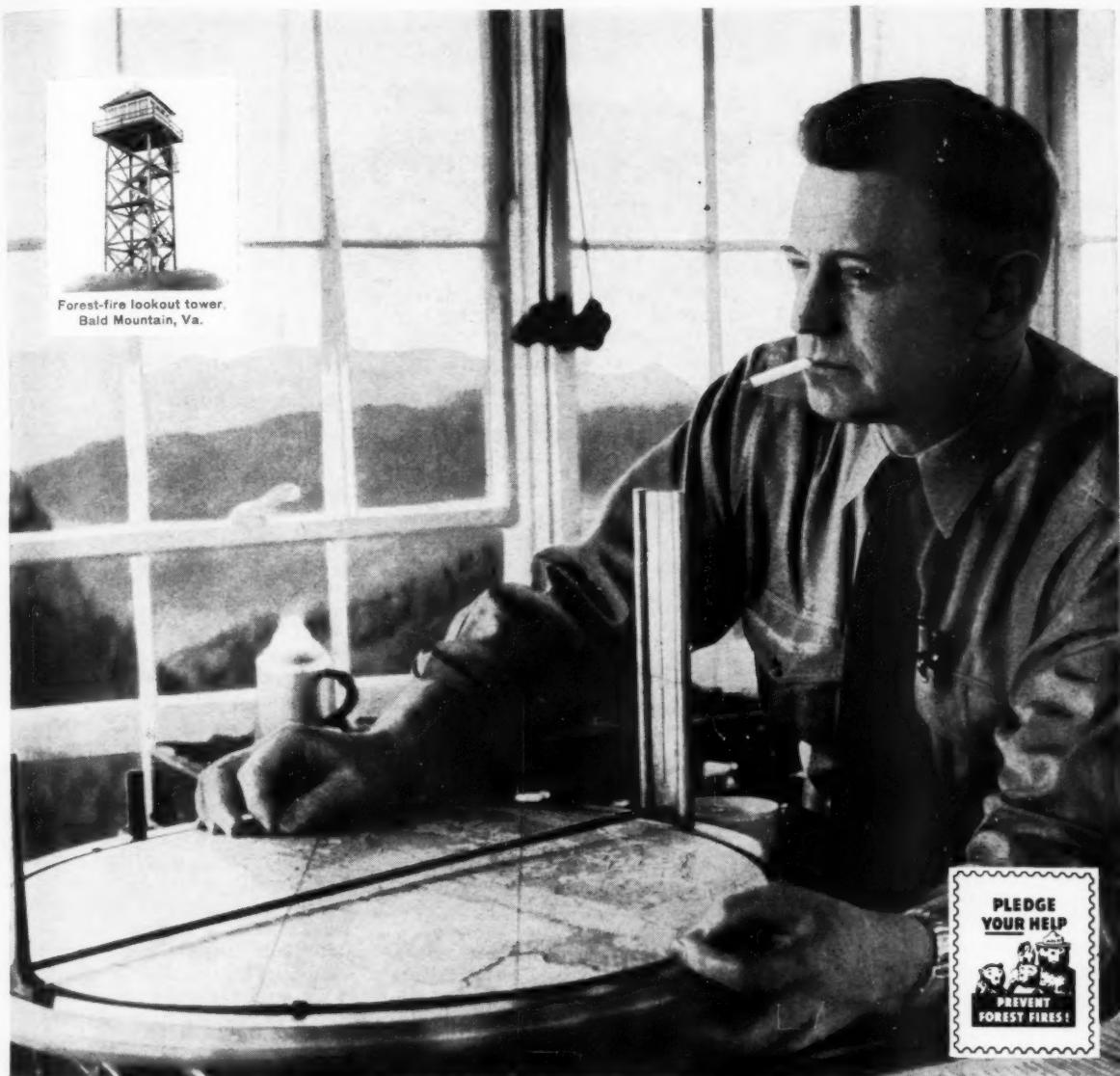
There was a confluence of events and ambitions. I have mentioned the desire to conquer the continent. This coincided with our need for food. Jonathan Baldwin Turner, who is given more credit than anyone else for the Land Grant college idea, contended loudly (from his own experience in Illinois) that farmers and fruitgrowers needed help in growing the right kind of plants and most of all in protecting the products they did grow from destruction by insects and disease. The historic outbreaks of the migratory locust on the northern Great Plains during the 70's and 80's, and the classic publications of the U. S. Entomological Commission under C. V. Riley that resulted from those outbreaks, advertised in every newspaper in the land the dire necessity of scientific aid to agriculture. Men

like Ezra Cornell, who had founded an agricultural college, and others who had tried to teach agriculture as a result of the passage of the Morrill Act, soon discovered that they had little to teach. The result was the founding of the Agricultural Experiment Stations. The U. S. Department of Agriculture was established in 1862, but had not a single field station until 1894. But altogether, some fundamental building had been done for agriculture.

Now it would be a mistake to give the idea that many farmers and livestock men were concerned about agricultural research during the latter decades of the 19th century and the first two or three decades of the 20th. In general the ordinary farmers had a very low regard for scientific agriculture and the cattle and sheep men had even less. In times of emergency, yes, but otherwise they felt they could get along without such fancy ideas. However, the boll weevil in the South, the need for proper fertilizers in all of the tobacco growing areas, the losses of fruitgrowers from fast-talking nursery-stock peddlers, and the success of grain growers who used better varieties, all kept alive the legislative support, state and national, for agricultural research. It is fair to say, though, that a vote of the growers of any commodity save fruit (fruitgrowers have long been the most intelligent), if the majority opinion were to prevail, would have wiped out agricultural research in many areas of the country, if not even on a national scale. We believe that would have been true up to the time of World War I. What saved the work up to then was the dogged persistence of men in agricultural colleges together with the general public favor in which agriculture was held.

Besides this head start that agriculture had over forestry, there was the basic fact that, in forestry, *the crop had already been grown*. At least up to World War II, except for a few isolated minds, that's the way things appeared. Why put a penny into forest research during the 1930's with stumpage going at two or three dollars per thousand? What idea more ridiculous than that could be suggested? Even during World War II and the years immediately afterwards, at least 60 per cent of the tree was left in the woods.

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Land Grant college and Hatch Acts were for agriculture, was the establishment of the National Forest Reserves in 1891 and the U. S. Forest Service in 1905. The Forest Service with its high morale and dedicated workers bridged many a gap. The Forest and Range Experiment Stations persisted in the face of many obstacles and discouragements. But in every state of the West and in many parts of the East, the Forest Service also obtained the aid of prominent citizens who had nothing directly to do with the forests but yet became devout supporters.

The whole situation in forestry has changed since World War II. The change is reflected in the opportunities for employment of forestry graduates. Thirty years ago and previously, practically all the graduates went into government employment, mostly with the U. S. Forest Service. Today they go also to wood products industries, become foresters for private companies, pursue graduate work and wind up in research laboratories; a much smaller proportion go to government.

Another spectacular change is the development of tree farms by private companies. A new crop is being raised, which puts forestry into many of the situations that agriculture experienced. There is greater interest in soils, disease, and destructive insects, as well as in the really fundamental problem of growing better trees. If you're going to the expense of growing trees, you better grow good ones that have the best chance of paying off on a 75-year investment. James Eddy was a prophet who didn't just cry in the wilderness; he founded a tree bank (now the Western Institute of Forest Genetics, U.S. Forest Service, Placerville, California), the dividends of which will become greater as generations of trees and men pass along.

Agriculture and forestry are alike

in one respect. It can be supported that both are commercial activities within the "public domain." In other words, the public has a stake in them. Soil erosion, regardless of who has immediate control of the land where it occurs, is a loss to the nation. The conservation of water and the preservation of the great watersheds on which all of us depend are very much in the public domain, regardless of who may be in charge of the commercial ventures on the land. These facts, together with the economic benefits that come to *all* the people from the successful operation of our agriculture and forest resources, make it incumbent on the public to support at least fundamental research to keep agriculture and forestry in the greatest possible economic health. Who benefits in a timber-based town, from a permanent and prosperous forest industry? Just the workers and stockholders in the companies that operate there? No, grocers, barbers, lawyers, teachers, bankers and auto salesmen all benefit. Just as evident is who benefits from the development of irrigation in any arid section of the West. Actually, the *communities* which depend on the irrigated lands ought to pay a portion of the reclamation costs that brought the land into production. Without irrigation, there might be a gas station attendant or two but not many other people. Indeed, the responsibility is wider than just the immediate community. Wholesalers in distant parts of the state who supply the natural resource industries also benefit.

To argue that each commodity, whether agricultural or a forest product, should pay for all the research pertaining to it is a snare and a delusion. It is a snare because it has caught the fancy of some legislators and other people who ought to know better. It is a delusion because it is

(Turn to page 72)

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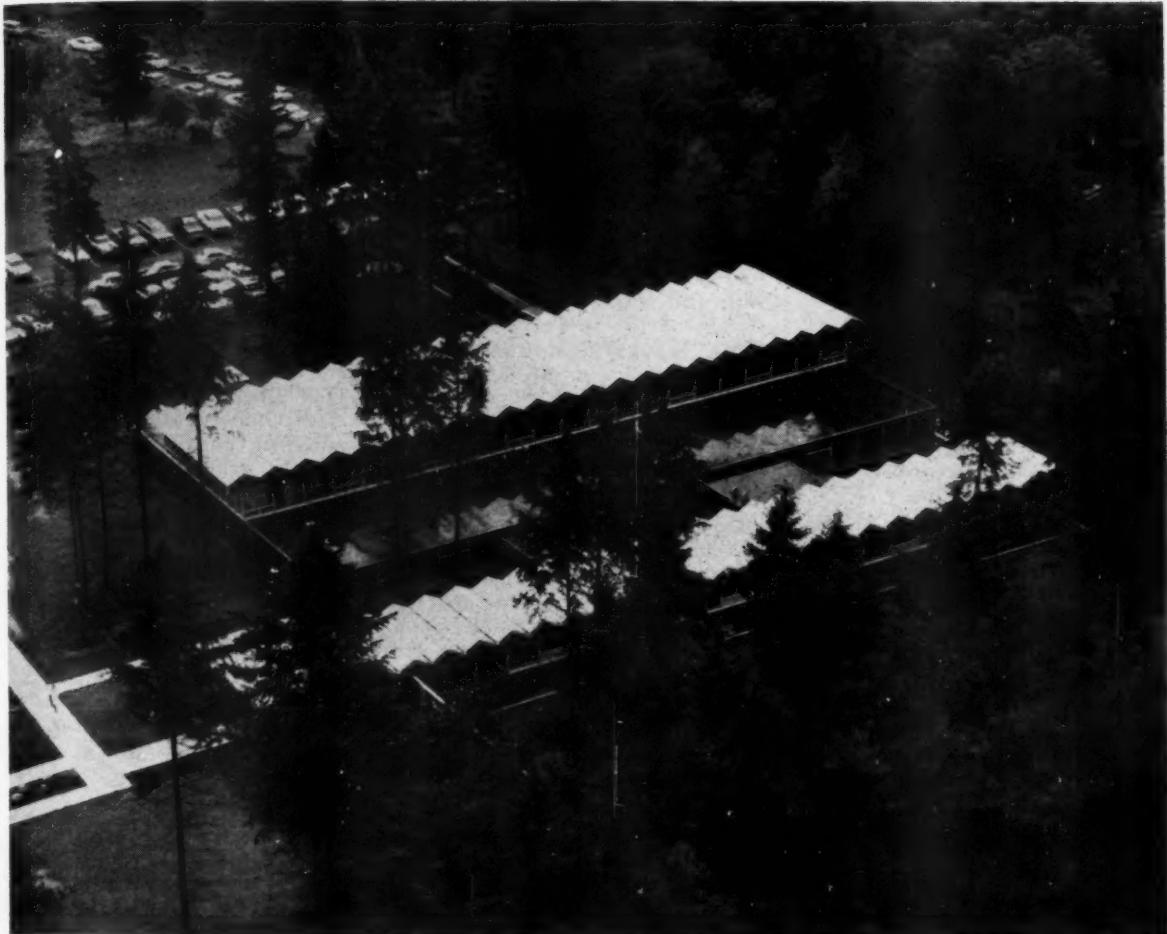
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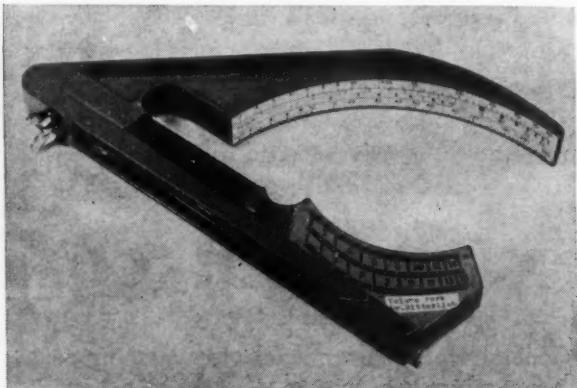
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Paso Por Aquí

(From page 35)

kind, encrusted with the accumulation of 100 years, was another find before we at last continued on our way. At home that night, we scrubbed the disk with vinegar, with lemon juice, with cleaning powder until its identity emerged—an 1853 dime, bright again as it was the day when it was probably given in change at the sutler's in old Fort Craig. What a thrill to recreate the little scene of a soldier with a hole in his pants pocket losing a dime on the path beside the blacksmith shop!

Hardly even a footnote to history, yet it is such simple, small things that help history to come alive.

Once a visitor to Santa Fe asked me about a governor who had been beheaded back in 1837, and I guided him out to the south edge of town where a small crude boulder in a weed-grown lot marks the spot where a politically-inspired Indian rebellion had been climaxed by the assassination of Governor Albino Perez. At this spot Governor Perez had been murdered and beheaded, and from this point the Indian rebels marched on the palace, carrying the governor's head on a lance.

Only the small boulder, with the brief inscription, marked the spot in a large, vacant field . . . just another marker, and a crude one at that. What made this incident in history come alive for us, was the house across the road from the marker. This was the home where Governor Perez had taken refuge for a few brief hours before his assassination.

This had been the home of Don Salvador Martinez, and here surrounded by Don Salvador's family, Governor Perez had enjoyed a respite of serenity while he waited for

the inevitable. Today there is still a look of serenity about this venerable old adobe house. No marker proclaims its historical importance—but descendants of Don Salvador still live there, surrounded by memories that give history a personal value and significance.

And so it is with so many places and events in Santa Fe. The world famous Santa Fe *Fiesta* over the Labor Day weekend had its origin in 1712, proclaimed by Governor Penasola to honor De Vargas' reconquest of the city twenty years before. And in June each year a procession from the Cathedral to Rosario Chapel honors the statue, *La Conquistadora*, which De Vargas had carried on his reconquest. This same statue is carried in the place of honor in the procession and remains one week at Rosario Chapel, which was built on the site where De Vargas and his men camped and prayed before victoriously entering Santa Fe.

These ties with the past are real—physical, so to speak, so that the event comes alive and takes on a feeling of timelessness.

Another example: one of the most charming places to visit in Santa Fe is the little chapel of the Sisters of Loretto at Loretto Academy, just a few hundred yards from the plaza. The chapel, designed by the same French architect and built at the same time as the Cathedral of Santa Fe, is an architectural jewel. It is small, but handsome in its tininess.

There is a beautiful legend about the building of the circular staircase in this chapel that the Sisters like to tell—and the story of the staircase brings into dramatic focus the historic part played by the Sisters who came across the plains by wagon

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train to bring education to the children of Santa Fe.

By 1878, the Sisters had managed to accumulate enough money to build their little chapel, but when it was near completion they discovered that the stairway to the high choir loft would take more room than could be spared—and also that funds were about exhausted. The nuns despaired of the chapel ever being finished with these two obstacles to overcome. But their faith was strong and their prayers were many. Then one morning an old man with a white beard, carrying a box of carpenter tools, appeared at the convent gate and asked to speak to Mother Magdalen, the Superior. To her he announced that he had come to build the stairway to the choir loft.

The Mother Superior explained that materials were not available, and that even if they had the materials they had no money to pay a carpenter. The old man said he would go ahead with the work anyway, and when it was completed they could talk about payment. He went into the chapel and closed the doors. Days passed, and though there were no sounds of hammering or sawing, soon the carpenter emerged—his task completed.

He had constructed in the smallest space possible, a circular staircase of dark, polished wood, thirty inches wide, with five spirals and a total of 33 steps. It was a masterpiece of craftsmanship, with flowing balustrade and long sweeping handrail. Built originally without nails and without a single brace, it remains today a very gem of the cabinet maker's art.

As the carpenter was leaving, the Mother Superior thanked him and asked his name and address that she might later reimburse him as funds became available.

"*Soy el carpentero*, I am the carpenter," the old man said in Spanish and left as mysteriously as he had come. No one ever remembered having seen him around Santa Fe before, and none saw him again.

From this unique incident, the legend grew that it was the Holy Carpenter, St. Joseph, who built the staircase. And to this day it is still called the Miraculous Staircase.

Visit the little chapel and hear the story from the gentle Sisters and you come away—no matter what your denomination—with a lift of the spirit and a feeling that you have experienced a brief interlude behind the curtain of history.

Or visit Taos and you feel the presence of the great scout, Kit Carson. You can roam through his old home and be in his presence—or stand in the plaza and take note of the fact that the American flag flies over it 24 hours a day—one of the few places in our land where this is sanctioned. It dates back to Civil War days when Southern sympathizers time after time hauled down the American flag. Kit Carson and Captain William Simpson cut a stout flagstaff and defiantly nailed the flag to the top.

"Now let them try to haul it down," they said.

Other flags may come down at sunset, but the flag over Taos plaza waves briskly in the breeze throughout the night.

Then because no one—as the poet said—can be a patriot for long on an empty stomach, drop into one of Taos' many fine restaurants and try the historic menus of New Mexico. They truly are historic, and no less a historic figure than Coronado himself recommended them way back in 1540, referring to the foods supplied by the Zuñi Indians in that year.

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Reading About Resources

(From page 11)

and Black, and go to another volume concerned entirely with termites, to be as engrossed by the termites as he was by the battling men and jungle.

This is exactly what I did, and found in *Dwellers in Darkness* (N9) by S. H. Skaife of South Africa a fine exposition of natural phenomena that is cut from the same cloth as *The Life of the Bee*. Here in a mere 174 pages is the straight forward and unadorned account of what Dr. Skaife has learned in a lifetime dedicated to termite study. To the layman, the data is incredible. Imagine this: "The termites can undoubtedly control the appearance of the various castes in the nest as the exigencies of the colony require and they do this by changes in environmental factors that bring about the appearance of suppression of the hereditary characters that distinguish the castes. We are still quite ignorant of the nature of these environmental factors by means of which the termites exercise control." Indeed, the Amazon held fewer mysteries!

Having got through this random selection from the Natural History Library—from horses to ants, so to speak—the world we live in begins to take on those magic colors which children see. Our eyes, tired by the dreary business of being an adult, stir with new life. Great writing is performing its function of awakening the reader. For these are the kinds of books which, in the best possible sense, make us children again.

There are three other titles in this series that bear special note, if only to let you know that they are available at a modest price: John Burroughs' *America* (N13), edited by Farida A. Wiley; *The Mountains of California* (N12), by John Muir; and *The Exploration of the Colorado River* (N11) by John Wesley Powell. My personal preference is the Muir book, but each of these classics has and deserves its own devotees. All three are more important to a private library of natural history than book shelves.

To conclude on a sour key, let me say briefly that *Modern Science and the Nature of Life* (N8) by young, brilliant Harvard professor William S. Beck, is the most able study of organic life that has recently been con-

(Turn to page 66)



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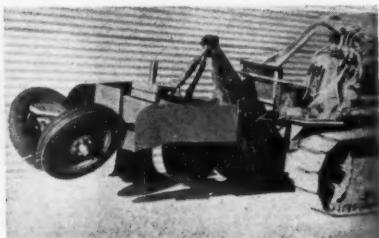
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ducted within the binding framework of a solely analytical, intellectual mind. Dr. Beck appears to recognize nothing beyond what his physical senses can tell him, or his conscious mind arrange and order from these sensory perceptions. Unless I have misread him completely, I would regard him as a materialist in a very old-fashioned sense. For this reason, and despite the book's great scholarship, its superficiality—and hence its irrelevance—is appalling. If a scientist chooses to disregard or discount the intuitive insights of human history, and what these insights say concerning the nature of life, let him then honestly admit that he is reporting on life from the narrow viewpoint of what can be intellectually analyzed—and thus reporting on only a very small portion of life.

I do not believe that the natural world, and its physical manifestations, can ever be deeply and truthfully analyzed in a vacuum, apart

from the fact of God. And the scientific indifference to man's intuitive knowledge of God as the originator and sustainer of life is an adolescent phase, which the most reputable science is already outgrowing. Dr. Beck has not learned as much as his scholarship would indicate.

Other titles in the series are:

Shearwaters (N4), by R. M. Lockley. A charming, personal account of a naturalist's love affair with the birds called shearwaters.

From Fish to Philosopher (N10), by Homer W. Smith. A literary approach to the kidney, and its unique significance in vertebrate evolution.

The Wandering Albatross (N6) (revised), by William Jameson. An admiral's recollections of his years with the albatross.

The Pacific Islands (N14) (revised), by Douglas L. Oliver. A superb survey of the most romantic area of the world, by an anthropologist who knows his business.

Minnesota Launches Program

(From page 14)

land use if our state is to fulfill its tremendous natural resource potential for the future."

Following is a list of council members, the interests they represent, and excerpts from their comments upon appointment:

Robert W. Burwell, regional director of the Bureau of Sport, Fisheries and Wildlife, Minneapolis, representing sports-fisheries interests. "The kind of environment we create for ourselves—how we care

for our land, water, air, forests, and wildlife—will determine the kind of lives we will lead in the future. If successful, the council will insure for our citizens that in the years ahead we may live in harmony with our land and continue to glory in the wonder, the beauty and the richness of it."

Minneapolis Municipal Judge Edwin P. Chapman, recreational interests. "The population explosion, greater leisure time, the greater mobility of our population and the greater demands upon all of our natural resources compel an immediate study and inventory with a declaration of program and policy to safeguard our remaining natural wealth of resources for the enjoyment of the present and future generations."

Hugh H. Harrison, chairman of the board, Pittsburgh Pacific Co., Minneapolis, mining interests. "... the economic well-being of the northern half of the state is almost entirely dependent upon economically successful utilization of natural resources—mineral, timber, water, game, land—and the welfare of the

(Turn to page 68)

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Minnesota Launches Program

(From page 66)

entire state is deeply involved in the economic success of this utilization."

C. D. Loeks, director of the Twin Cities Metropolitan Planning Commission, planning groups. "It is perhaps more important than ever before that the various interests concerned in the conservation management and utilization of our state's resources be brought into a complementary and harmonious relationship in the development of policy which will secure maximum benefit for people of our state and nation."

Lawrence P. Neff, forest supervisor, Superior National Forest, Duluth, representing the Forest Service. "The national forests of Minnesota, the Superior and the Chippewa, managed under the concept of multiple use are substantial factors in providing for the people and industries such forest resources as water, timber products, outdoor recreation and habitat for wildlife. These should be integrated as fully as possible with the other land ownerships. The council can have a major influence in fostering such integration."

Clarence Prout, commissioner of conservation. "In a very real sense conservation is fighting against time. Lost time in husbanding and perpetuating the basic resources of the nation—soil and water and the essentials of life which must spring from them—depletes and places in dire jeopardy our resource bank. Informed conservation organizations play a most vital role in alerting and educating our citizens in one of the most important fundamental principles involved in sustaining a free

way of life—the perpetuation of our natural resources through wise use."

Raymond J. Wood, Cloquet, director of forest management and timber procurement, Diamond Match Division, timber interests. "Because much of our commercial forest land is in federal, state and county ownership, there is a real need for coordination of the management objectives to make certain that the needs of each segment of the industry are given full consideration. The council can provide an invaluable service to both the public and the industry in promoting such a coordinated effort."

Other members include Jack Cornelius, Minneapolis, citizen representative; Armando M. DeYoannes, Iron Range Resources and Rehabilitation commissioner, St. Paul; William F. Dietrich, Le Sueur, southern counties; Wesley E. Libbey, Grand Rapids, citizen representative; Adolph F. Meyer, St. Paul, water; Mrs. Kermit V. Haugen, Minneapolis, citizen representative; Albert Gillie, Williams, northern counties; Frank Crippen, Sanborn, representing Soil and Water Conservation Districts; Nobel Shadduck, Annandale, citizen representative; R. J. Whaling, Grand Rapids, county government; Duane Wilson, commissioner of Agriculture; and Dr. O. Meredith Wilson, president, University of Minnesota, education.

Ex-officio members include State Senators Donald Sinclair, C. C. Mitchell, and Clifford Lofvengren, and State Representatives Arne C. Wanwick, Harry Basford, and Sam Franz.

Riders Up!

(From page 38)

ponents ask that only 8 per cent of the national forests be preserved as wilderness.

I ask: Who is being selfish? Is it those who ask only that 8 per cent be saved as wilderness? Or is it those who now have 92 per cent and want the remaining 8 per cent also?

Another point is germane to the discussion. The national forest wilderness areas are now established by administrative order of the Secretary of Agriculture. He could wipe out any or all of them by a stroke of

the pen. Wilderness preservation legislation pending in Congress for the past six years (now S. 174) would add no acreage at all. But it would give the wilderness areas as now administered the security and stability which it must have to withstand the constant onslaughts of commercial interests. Remember, the national forests belong to the public, not to private enterprise.

It is self-evident that the wilderness system maintained by administrative order is more fragile, less

stable and more easily chiseled away bit by bit by adverse interests than would be a system established by Congress as a national policy. Let us be realistic and ask why livestock, lumbering, mining and other commercial interests, dam and road addicts, while professing to favor wilderness preservation as it now is set up, are so bitterly opposing wilderness legislation.

The answer is patent. Their hopes of taking over wilderness areas little by little for their selfish purposes would be forestalled by Congressional action. These same interests adamantly opposed the establishment of the national forests in the first place and still would like to see much of them abolished. I know, for I have been in the middle of the battle for more than half a century. When I went on as forest ranger in 1909, my supervisor instructed me and others never to step outside the door without our side arms on. Feeling was that high!

So much for that. Now we come to the stream-studded and lake-laden Pecos Wilderness in the Sangre de Cristo Range of north central New Mexico. From the summit of any of

the peaks a panorama of unbelievable magnificence — a mosaic of alpine forests, aspen woods, rock slides, spacious parks and flower-spangled meadows — meets the eye.

Beyond, as far as one can see, lie mesalands and plains to the south and east. Across the Rio Grande valley to the west rise the Jemez Mountains with Los Alamos, the birthplace of the Atomic Age, nestling at their base. To the southeast is the huge, double-humped, granite-faced mountain, Cerro del Hermitano (Hermit's Peak) which bulges up, with sheer cliff drops of one to two thousand feet on the north, east, and south from the 10,000 foot crest.

Atop the peak at the edge of the dizzy escarpment are three crosses the size of railroad ties and nearly twenty feet high. They are maintained by Los Hermanos Penetentes (a religious order) as a supreme Calvary in honor of Juan Maria Augustini, a devout hermit who lived in a cave near the cross from 1864 to 1868.

The lower borders of the Pecos Wilderness may be entered from all sides by good trails. Saddle horses for one-day rides and pack-trips are

available. Outstanding of all trips is the annual 11-day Wilderness Trail Ride sponsored by The American Forestry Association in early September right after the rainy season ends. The riders, usually numbering 20 to 25, rendezvous at La Posada Hotel in historic old Santa Fe and have a "get acquainted" banquet on the evening before the ride starts. The outfitter, Forest Service officials, AFA medical officer and representative attend and brief the riders on the trip, and answer questions. It's an interesting session.

I may tell them of suggesting to a local lady, who wanted to be prepared for the ride, that she start a week ahead and ride two miles the first day and increase it a mile a day. After the second day's ride she stepped into a drugstore to make a purchase. The clerk, an exceedingly bowlegged ex-cowboy, said, "May I help you, Madam?"

"Yes," she said, "I'd like a box of talcum powder, please."

As the bowlegged clerk turned and pranced across the store to where the talcum powder was, he said, "Walk this way, Lady."

"Cowboy," the lady replied, "if I

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could only walk that way I wouldn't need the talcum powder."

At 8:00 sharp next morning bedrolls and duffle are sent by truck and riders taken by cars or bus 44 miles to Mountain View Ranch at Cowles where, at road's end, motor vehicles are traded for horses and saddles, and assignments made to riders, stirrups adjusted, etc. After a fine buffet lunch we set out on a seven-mile ride to our first camp at beautiful Horse Thief Meadows.

We pass the picturesque Panchuela Ranger Station, where I was district ranger 50 years ago, and soon enter the wilderness area boundary. Now for 11 days and nights there will be no more roads, cars, flickering TV's, glaring neon lights or clanking city noises. Nerve-soothing, tension-relaxing, meditation-provoking solitude prevails.

Mister, Mrs. and Miss have been left behind. From now on it's Jim, Mildred, Joe, Ellen, Pinkie, Shorty, etc. Coming from a dozen or more states, north, east, south and west, and of widely varied ages, educations, occupations and stations in life, the riders now compose a happy, congenial group. They have one thing in common—it's a love of the outdoors.

An hour and a half brings us to a point on Cave Creek where we take a 20-minute rest stop. As AFA representative I call out, "Ladies to the rear; gents up ahead." That way physical needs may be accomplished without embarrassment.

This spot is interesting because here the entire stream flows into a huge cave to come out again a half mile below. Riders inspect the cave and get out cups and drink from the cold, clear stream. I have to show some of the novice Trail Riders how to tie their horses so they won't get a foot over the rope—four feet up on the tree and three feet of rope from tree to halter. Some stirrups are not right and have to be adjusted. Cinches are checked and tightened as needed.

Then we are off again, climbing alongside the tumbling water. We pass through magnificent aspen groves and meadows where wild flowers abound, cross over a low divide to our camp in charming Horse Thief Meadows. To our delight the outfitter has sleeping tents all set up for us and the cooks are busy in the "kitchen" under a spreading spruce tree. Horses are tied to a stretched-rope hitching rail and wranglers get busy unsaddling, hobbling and bellng them for the night.

I warn riders that after this they will have to set up and take down their own tents, and I call them together and demonstrate how easy it is to set up an 8 x 8 tepee. Tent mates have been chosen. Then while the riders unscramble their bedrolls and duffle bags, blow up their air mattresses and get set for the night, Doc, Jim and I go fishing in some fine nearby beaver ponds. Riders are elated when, at dusk, we bring back our limits of nice brookies for a trout breakfast.

That evening, around a roaring bonfire, there are group conversations, some story telling and singing of the old songs. Joe, a veteran Trail Rider, proves to be a good song leader. After awhile I ask for attention and have the riders, one by one, tell where they are from, what their occupation is and how they happened to come on this ride. It proves to be most interesting.

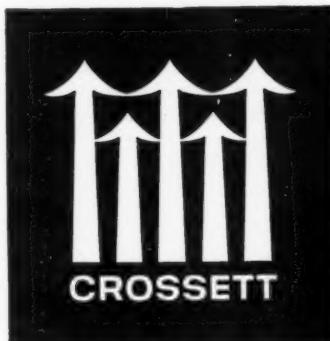
The outfitter announces breakfast at seven. I tell them I'll call them by a war-whoop at six-thirty. "We want to start our trip to scenic Lake Katherine at 8:30," I say. "There will be makin's for lunch and you make your own sandwiches and fill your thermos bottles with coffee, juice or tea." There are always questions to be answered.

I tell them the story of Horse Thief Meadows and how it got its name. Pinkie wants me to tell about Beatty's Cabin (she'd read my book *Beatty's Cabin*), but that will have to wait till the night we camp there. I promise that tomorrow night the ranger will give us an interesting talk on the Forest Service administration of the area. Then at Baldy Lake camp I'll tell them of wildlife in New Mexico and this area in particular.

Time has slipped by and it's ten o'clock. Time to go to bed and dream of the magnificent sights and thrilling adventures of the ten days on the trail and six camps ahead. But first Doc asks that I give my poem *Perception Lost* which he saw in *Arizona Highways Magazine*. I oblige.

*His eyes are dim who cannot see
A mountain's purple majesty.
His ears are deaf who cannot hear
Love songs of birds in spring of year.
His feel is numb who never seeks
A mountain breeze to cool his cheeks.*

*His soul is dead who gets no thrills
From rocks and woods and templed hills.
He who no wilderness has trod
Has missed a chance to walk with God.*



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Udall's Thrift Praised

Rep. John E. Moss, chairman of the House Special Government Information Subcommittee of the Committee on Government Operations last month commended Secretary of the Interior Stewart L. Udall for his thrift in saving the government \$130,000—and at the personal expense of omitting his own name from 11 million pamphlets distributed to visitors to the national parks every year.

In the past, the name of the Secretary of the Interior has always appeared prominently on the pamphlets—a matter of some importance,

most would agree, to any individual in public life. But rather than throw away millions of brochures printed by the previous administration, Secretary Udall decided to go ahead and use them up rather than redo them. He has also ruled that while he is Secretary his name will not appear on any of the 139 separate leaflets to be published for parks visitors.

"This, Mr. Secretary, is the first government information restriction, if such it be, which I have ever found myself in the position of praising," Mr. Moss told the Secretary.

He Who Sows, Reaps

(From page 60)

predicated on a static condition which does not obtain in either forestry or agriculture. Some commodities would not have been added to the sources of our wealth under such a principle. There would be an altogether inequitable relationship between commodities, for one often benefits from the research done on another, and some kinds of problems require expenditures for research out of all proportion to the resources of a particular commodity. To adopt such a policy would be extremely short-sighted.

Research on industrial forest problems of immediate application has been pursued by large companies and by industry-supported laboratories such as the Oregon Forest Research Center at Corvallis. But there remain some very fundamental subjects for research. In these, schools of forestry should participate on an expanded basis commensurate with the great economic value of the forest industries, and the strategic importance of our forests to all of the

people. Here we refer to such long-term investigations as those pertaining to forest soils, the breeding of better trees, forest economics including forest taxation, and the broad field of conservation. Agriculture and forestry can work together on many of these things for both are dependent on the same basic sciences and are very much concerned with the same economic principles.

To be perfectly frank, we are not sure that the rank and file of the producers of wood products are altogether sold on forest research. Some of the big companies, yes; but not all of them. Some of the smaller operators who cannot look so far ahead because of their lesser timber holdings and their dependence on government agencies for their supply of logs, no. In general the time has been too short for the growth of confidence in forest research. The situation in forestry today is comparable to that which prevailed in agriculture prior to World War I. But we have the strong feeling that the general sentiment amongst the producers and the people may be changing rapidly. Those who understand the vital significance of forestry in the total economy know we cannot afford to do anything else but give forestry the strongest possible backing in both fundamental and applied research. The stakes are high, for the future of the forest industry will determine markedly the future economic welfare of large numbers of our people.

Whatever the full explanation may be for forestry lagging so far behind agriculture in the expenditure of research funds, the time has come to place it in a proper relationship.



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THE OMBÚ TREE

NATURE'S ENIGMA

By ALLAN W. ECKERT

NATURE has produced many strange and wonderful plants and animals but perhaps none quite so paradoxical and puzzling as the massive ombú tree of the Ar-

gentine pampas—a tree which has established itself as a striking contradiction to just about everything we know about trees.

Imagine, for instance, a tree whose



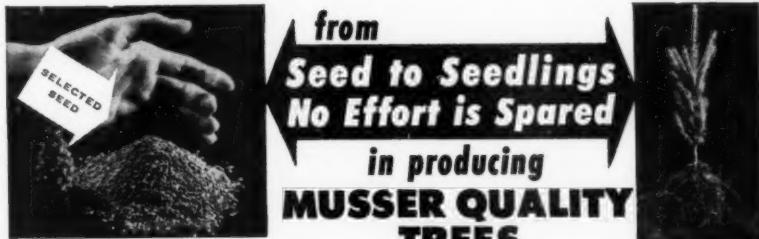
The Ombú Tree . . .
 Paradoxical and Puzzling
 Its wood won't burn . . .
 Keeps away birds and
 animals
 It shuns diseases . . .
 Lives more than 500 years
 It resists cyclones . . .
 And stays fresh through
 droughts

wood will not burn, which cyclones cannot blow down, which isn't bothered in the least by prolonged drought, which all birds and insects abhor and which seems deliberately inclined to prevent its own reproduction. Group these strange attributes together and you have a thumbnail sketch of this giant of the plains.

No one has ever seen an ombú dead of natural causes, diseased, decayed or dried with age. How long the tree actually lives is anyone's guess. Nearly six decades ago the Argentine Forestal Society closely examined one tree known as the Viceroy's Ombú. This tree was named in honor of Viceroy Vértiz. It was ancient in 1779 when it stood in the Viceroy's *quinta* at Olivos in suburban Buenos Aires. The society determined that the famed tree was at least 500 years old then and possibly a great deal older. It still is growing.

It is not at all a simple matter to determine the age of an ombú. This is due to another of its inherent contradictions as compared to other trees. Instead of growing one annular ring for each year of its life, the ombú may grow none at all, or it may grow up to ten, depending upon a variety of conditions.

One word which more than any other describes the ombú is enduring. Because of its massive root system—both above the ground and subterranean—cyclones cannot blow it down. Unlike the roots of trees with which we in the Northern



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By

**SAMUEL TRASK DANA
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Hemisphere are accustomed, the roots of the ombú seem almost to be an extension of the huge trunk and dig deep into the wonderfully rich alluvial soil of the pampas. In these roots the ombú stores vast quantities of water in millions of tiny reservoirs, from which it draws what it needs during extended dry periods — droughts, incidentally, which often are fatal to tree species not native to the pampas.

It is this same moisture-bearing characteristic which permits the ombú to resist with ease that greatest scourge to other trees—fire. Ragging conflagrations in the grass might char the very ground at its feet, but so saturated with moisture is the lower portion of the tree that the fire does little more than blacken the trunk with carbon deposits. Should the pampas turn a dry, dead yellow from lack of moisture or a charred black from a ravaging grass fire, the ombú always retains its lush verdancy.

Although an ombú lives for many hundreds of years, it never grows old. This is another of its strange paradoxes. No living creature known to science possesses the secret of immortality, but there's a pretty good chance that the ombú has been blessed with something close to it which permits it to maintain an almost perpetual youth.

The ombú lives in a constant rejuvenation of its own outer surface. As the interior of the trunk becomes lifeless, the exterior continually expands in fresh, young growth. Although the tree may look incredibly old if viewed from a short distance, actually it is a young surface enfolding within itself all the past generations of life. Only rarely is an ombú ever cut down, but when this occurs it presents a most unusual phenomenon. All of the inside of the massive trunk is lifeless, including the root portion going far underground. Yet, the surface is as strong and fresh as it was hundreds of years ago and even the dead portion is believed used as a reservoir for water storage.

Man is undoubtedly one of the most implacable enemies of trees. Sooner or later, it seems, if a tree is not destroyed by storm or fire or insects, man becomes its final undoing, either for lumber or for firewood. Here, once again, this living monument of the pampas has a perfect defense.

The wood of the ombú tree is absolutely worthless for either fuel or lumber. Freshly cut it will not burn. Permitted to dry, the wood

burns rapidly with hardly any heat and so completely that within mere seconds it turns into powdery ash. Actually, to be scientifically correct, the ombú is more of a titanic weed than a tree. When green it is just as hard to burn as a weed; when dry it burns as rapidly and as completely. Strangely enough, the ombú is a member of the family *Phytolacca*, which includes our own common pokeweed or inkberry—itself an import from the tropics.

Of all the strange quirks which fit together to make up the ombú, the oddest is that the tree is almost incapable of reproducing its own kind. Undoubtedly Dame Nature knew her business when she devised the ombú with this handicap. With its remarkable longevity, the pampas would certainly long ago have turned into a virtually impenetrable forest if it reproduced with the facility of other trees.

In practically every higher order plant, fertile seeds are produced with great abundance and with a reasonably good chance of survival. One need only to look at our own forests to realize the truth of this. Fertilization is, in most cases, no problem at all with these trees. Many blossoms, for instance, possess both male and female reproductive organs and, in cases where they do not, bees and other insects serve as pollination agents from tree to tree.

These trees also have various effective means of spreading their seeds. Some have wings and travel great distances with the wind. Others are encased in luscious fruits and, after being eaten by birds and mammals, are deposited with waste products elsewhere, even to the extent of having a built-in (or at least encircling) fertilizer. Some seeds are shot away from their pods and others travel away from the parent plant by clinging with annoying tenacity to the fur of animals and the clothing of humans.

As a result of all this, North American trees are constantly sprouting and new forests are always growing. In fact there are over 400 species of North American trees which, if left alone, quickly spread into large forests.

Consider, then, the plight of the ombú. An individual of this species has only one sex and cannot fertilize itself. There are, of course, a number of trees with this same trait, but all have one advantage—they grow quite close together.

Not so with the ombú on the pampas. So repugnant are both its sap and odor that insects studiously

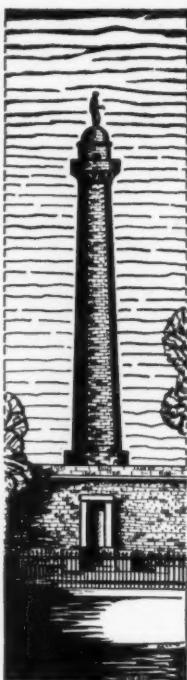


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Consolidated forester explains nursery problems

There are many facets of the fighting, protecting, and developing to be done but what about the convincing he must do? Because of the many problems facing the industrial forester he may be found talking to himself, but today he is also faced with the growing need of talking to people—people who must be convinced. They may be hunters who have not seen the other side of the deer story, they may be legislators who are considering laws affecting the forest industries, they may be members of special interest groups who want vast forest lands reserved for their own limited use.

The forester faces a real challenge in his work with mankind. The forest primeval existed long before man arrived on this continent and, despite floods, fires, diseases, and animals, it survived until people threatened it. People want this area set off for recreation, some want that area reserved for camping only, others insist on another huge area for nothing to encroach upon. This group demands action now, that group says the shortage of wood will be critical in a few years. Each minority group has its own ideas and methods of expressing them. Each wants action today, not knowing what the future may bring.

So in effect the forest and forester are in danger of being overwhelmed with a people problem. Since the trees cannot speak (they would probably pack their trunks and leave if they could), the burden of defense rests with the forester. Some will say that action speaks louder than words, but this is one area where action and discussion must go hand in hand. Who is better qualified than the forester to present the mutual advantages of multiple uses of a well-managed forest to the public and industry?

avoid any contact with it, thus canceling that means of possible pollination from tree to tree. Failing in this, one considers the wind as an agent in fertilization. Yet, the ombú is a notably solitary tree. In most cases it is not even within sight of another ombú, and on the pampas, that is a great distance indeed! Wind, as a conveyance for fertilization, therefore, is extremely unreliable at best. Still, the wind remains the primary factor in ombú pollination.

With unusually good luck, such pollination does take place on occasion. Overcoming such a tough obstacle, it would then seem that this tree would be able to produce seeds with a reasonable chance of survival. This is hardly the case.

These seeds are so utterly distasteful—some even claim they are poisonous—that birds and other animals will have nothing to do with them. They have no wings whereby the wind might carry them away, nor are they shot considerable distances from the parent tree through a natural catapulting in the pod. When mature, the seed simply falls to the ground beneath the giant.

Such a fallen seed has tremendous difficulty germinating. The ground

Industrial Forester— Man of Action or Words?

What is the most important work of an industrial forester? The range of answers to this question could be as wide as the forested lands of these United States. Fighting insects and diseases, fighting forest fires, protecting future growth, developing a superior tree, developing a road network—these are some of the duties of an industrial forester which would be stressed.

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beneath an ombú is normally very dry and there is little hope of sufficient moisture penetrating the heavy, deep green foliage above to encourage growth in the seed. If, by some chance, the seed did find sufficient moisture and begin to grow, it is almost certainly doomed to death from one of two causes.

Sprouting in the deep gloom of the ombú shade, it will almost always succumb from lack of sunlight. If, by some great luck it should happen to fall to the ground beyond the reach of the parent tree's shadow, it will almost certainly die from the intense pampas frosts during the night.

As if to make up for her harshness with the ombú as far as reproduction is concerned, Dame Nature has endowed the tree with extraordinary longevity and resistance to maladies which quickly destroy lesser trees. These include its resistance to fire and the highest winds, as well as invulnerability to drought that can burn up all surrounding vegetation. Then, too, with its wood useless as fuel or lumber, a taste and smell that defies the onslaught of injurious insects and other creatures, the ombú seems in little danger of extinction. A solitary ombú, naked to the burning heat and whipping storms of the pampas, will still be standing while forests of other trees are sprouting, growing, decaying and falling over the years.

From a distance, the ombú looks like nothing so much as a monstrous, gnarled oak tree. And, as the oak is probably the most beloved North American tree, the ombú is by far the most popular and well-loved tree in Argentina. Beautiful poems have been written about it and novelists have made it a prominent figure in their writings of the Argentine scene.

Part of the reason for the great love of the Argentine people for this tree is its association with so many of their historical incidents of great moment. In fact, a large number of the trees have themselves become historical monuments as long-lasting as any made by man.

The Ombú of Hope, for example, is so called because at one time General José San Martín used its great roots as living chairs and tables and, with other eminent patriots of the time, solemnly dedicated his life toward establishing independence for the nation in the struggle then being waged. Gen-

(Turn to page 83)

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Uncle Mack's Rest

(From page 29)

Occasionally, in the Coronado (the only national forest to border on Mexico) is found the spoor of the gray wolf. The last confirmed kill of a grizzly bear in New Mexico was in 1933, and in Arizona in 1935. But a grizzly was taken in nearby Mexico as late as 1960, and in the adjoining state of Sonora in 1955. Infrequently, a big spotted jaguar (a 160-pounder was killed on the Coronado in July) crosses to the Arizona side.

Abounding are fox, coyote, ocelot, bighorn sheep, deer, elk (wapiti), antelope, turkey, bear, wild pig (peccary), small game, antelope, squirrels, cottontail, quail, bison, doves, grouse, beaver, ringtail cat, raccoon, badger, and muskrat, to name a few.

Barbary sheep have been introduced to a New Mexico grassland, and ptarmigan on the Sangre de Cristo Mountains of the Santa Fe, and partridge to the Kaibab north of Grand Canyon.

Of songbirds, suffice it to say the American Museum of Natural History, in a five-mile radius of its research center in the Coronado National Forest, counted 88 species. Fish include five kinds of trout, and warm water bass, bluegill, crappie, and catfish.

In June thunderheads pile up to 30,000 feet over Boulder Mountain, and blot out the sun, in just this way, over Mack's Rest. But this was no storm. It was oily smoke from explosive fire in high octane brush, and before the last ember was smacked with a shovel, 15,000 acres were cremated.

The nation's most inflammable forests also gave the nation its most famous firefighter.

"Hello there, boys and girls," says the familiar figure. "This is Smokey Bear."

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When Southwest forests are driest, and fuels are cured, the first summer storms are electrical and windy. Along the Mogollon Rim lightning play is second greatest in the world. Once again in 1960, the region led the nation with 2,900 fires, an all-time high. Twelve per cent were caused by man.

It follows that the Southwest is a laboratory of ideas for fire prevention and suppression. Here the Zuni and other Indians, as skilled if less famous, were trained as elite fire battlers, for service all over the West.

Where roads are few and country broken, the emphasis is in the air. Remote forests are being dotted with helicopter landing circles. The Southwest helped pioneer in aerial dropping of slurries, and air delivery of men. In Arizona this fire season daredevil firefighters helped perfect techniques of leaping from helicopters directly into brush. Twenty-four smokejumpers based at Silver City, New Mexico, in 1960 made 228 jumps on 79 smokes in the Gila National Forest alone.

But for all its attention to education and tactics, the Southwestern Region holds to some old-fashioned notions of personal responsibility. One hunting season on Carson National Forest a district ranger cited 93 hunters for leaving campfires. Gross negligence elsewhere has been vigorously prosecuted, as a few imprisoned firebugs can attest.

A forester parks on Screwtail Hill and clammers over the fields of granite to Mack's Rest. He notes the cattle and deer are pounding a trail across the grave, and he decides to inspire some improvements. Maybe he can talk a patrol of Boy Scouts to put up a little fence, he thinks, or—well, if not, he will do it himself.

The details of supervision of a forest region are uncountable.

One typical Southwestern national forest has issued permits for 2 airports, 27 apiaries, 5 cemeteries, 8 experimental and demonstration areas, 1 fish hatchery, 74 active mines, 3 motion picture locations, 3 pipelines, 53 power lines, 1 race track, 12 radio and television towers, 5 refuse dumps, 8 resorts, 1 rifle range, 1 school, 2 service stations, 37 water wells, and 1 wharf. And these are by no means all of the land uses on that forest.

The 850 full time employees of the Southwestern Region also are occupied with:

—Keeping books for nearly \$4 million annual income, of which nearly a fourth is given over to the states.

—Soil surveys, now totaling more than one million acres, for guiding usage plans.

—Assisting state and private forestry, in fire control, tree planting, soil science.

—Tending experimental forage ranges.

—Determining boundaries, and anyone who has tramped the West can appreciate the posting of 1,650 miles of boundary and finding of 671 public land section corners in one year.

—In the past two years, clearing up surface rights on 12 million acres of mining claims.

—In the same period, exchanging 15,000 community-needed acres for 37,700 acres desired for forest consolidation.

—Refereeing an emotional controversy regarding oil leases. Only the Carson has producing wells, but leasing is active on Sitgreaves and Coconino. Debate currently runs hottest over opening of the North Kaibab game preserve.

—Engineering roads, dams, signs, fire towers, and buildings from cabins to warehouses. In 1960, 29 concrete bridges and 92 miles of roads were completed.

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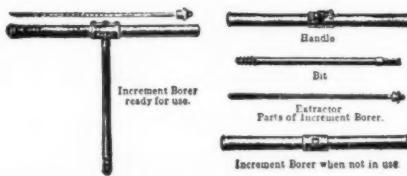
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In the Southwest, too, the future intrudes upon the present most insistently. A recent national forest recreation survey indicates that visits will increase tenfold by the year 2000. In just 39 years, the forests must be ready to absorb at least 70 million visitors a year.

For fire control, Southwest foresters are seeking new suppressants, practical ways to reduce fuel hazards, and they even dream of some day drawing the fiery teeth of the growling summer storms. For wildlife, the region recently started a 10-year improvement of habitat as part of Operation Outdoors.

An exciting promise is epitomized in a new \$32 million pulp mill nearing completion in eastern Arizona. Southwest Forest Industries of Phoenix will use 3 bil-

lion board feet of sub-sawlog material from six national forests of the region.

Here is creative multiple use. Once wasted treetops, slabs, and other mill trimmings will go into newsprint and kraft paper. The plant will employ 400. When Uncle Mack was enjoying his wilderness picnics a scant 25 years ago, there was not a factory of such size, making any product, anywhere in Arizona or New Mexico.

What marvels lie ahead in the Southwest? Wild-eyed dreamers historically have fallen short of reality, and old timers say that forecasts are made by fools and newcomers. But it may be safe to venture one guess.

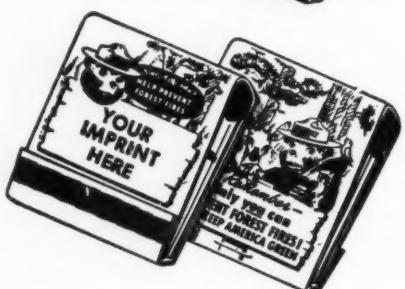
No lawn mower will run across Mr. McCord's grave. Not now, and not for a long, long time.

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There are 2,500 matchbooks in each case—50 cartons of 50 books each. All prices are for the same design, same imprint to one address Transportation prepaid on orders for four or more cases. Allow thirty days for delivery.

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The Ombú Tree

(From page 79)

eral Martin is Argentina's counterpart of our own General George Washington.

Another of the great trees, the Ombú of Pedriel towered high over one of the most decisive military skirmishes during the English invasions of the country in 1807. There are many other ombús named for great battles fought at their feet during the country's stormy period of civil wars. Many others have provided the shade where treaties and alliances were signed following the heat of battle.

Argentina has, of course, a wide variety of beautiful trees. The ombú, however, is the only tree indigenous to the country. Scientists have pinpointed its origin to a locality in the Province of Córdoba near beautiful Lake Iberá. Because of their beauty, a number of these native trees were planted in Spain during 1775 where they have flourished. Here they are known under the name *bellasombra*, meaning "beautiful shade."

The other trees which grace Ar-



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gentina's landscape—of which there are a great many varieties—have enabled Buenos Aires to become known as one of the most tree-shaded cities on earth. However, these trees were absent altogether until the late 1800's when rich officials and plantation owners imported trees from Europe and the United States by the hundreds of thousands. These trees were planted in their *estancias*. One of these was the *estancia* belonging to former dictator Juan Manuel de Rosas, which is now Palermo Park in Buenos Aires.

There are other reasons why the *ombú* is so loved and respected by the people of Argentina. Its trunk is enormous, often with a circumference in excess of 50 feet. Its vast spread of branches shades a portion of the ground upwards of 150 feet in diameter and its fantastically gnarled roots above the ground level form strange, broad chairlike surfaces where tired riders may rest out of the heat of the day.

The settler in the pampas is not presented with the problem North American settlers faced of making a clearing in a vast stand of timber. These huge, native trees of the pampas not only provide shade for the settler, but even form an adequate shelter from the severe storms which sometimes thunder across the plains.

So dense is the foliage, in fact, that seldom will even a smattering of moisture find its way to the ground over which the giant looms. Frequently settlers use the area under such a tree as a shelter for livestock and equipment, rather than to build sheds or barns.

Argentine bards have eulogized the *ombú* as the lighthouse of the pampas and the phrase fits it well. For the gauchos it served this purpose admirably, as it is ordinarily the tallest object in that vast sea of grass called the pampas.

Only at night does the *ombú* make a turnaround and, instead of providing shelter, actually forces any living thing beneath it to leave. After dark the foliage exudes a noxious odor which neither man nor beast can stomach. Some say it is distinctly reminiscent of skunk on a warm, wet night.

No other tree in the world—with the possible exception of the Japanese cherry tree—is so steeped in the tradition of the people in the land where it grows. Prominent in both poem and prose, it is also the subject of beautiful and heartfelt folksongs handed down from generation to generation by the gauchos and shepherds. As might be expected with a tree possessing so many variants in nature, it is also

deeply steeped in superstition.

It is believed, for instance, that even the most compulsive alcoholic may forever be cured of his uncontrollable drinking habit by the simple expedient of mixing a bit of the bitter *ombú* sap with his favorite alcoholic beverage.

Another belief is that a young suitor who wishes to dispose of his rival need only kiss the bark of the *ombú* and then, before his lips touch anything else, kiss the cheek of his rival. If, however, he should kiss his sweetheart first, the poison will backfire and kill him.

Equally rampant are stories of vast treasures buried at the feet of these prairie behemoths and forgotten over the years. That the *ombú* would provide a very permanent marker for the position of the treasure hoard certainly seems justified.

In discussing any of Nature's creatures, whether plant or animals, it is a risky thing at best to make such all-encompassing statements about any single species to the effect that it is best, biggest, strangest, longest lived, and so forth. It seems reasonably safe, however, to rank this incredible *ombú* as certainly being at least *one* of the most unusual, paradoxical, and enigmatic living things in the world.

Washington Lookout

(From page 9)

of the National Park Service. The proposed Point Reyes National Seashore exemplifies critically significant ecological processes involving varieties of earth and life resources which combine to produce rare scenery and a diversity of recreation opportunities. All of the recreation activities reasonably allowable at a national seashore are frankly encouraged. Boating and other water and beach recreation, softball, and other sports and games may be highly consistent where they can be worked out without endangering other important considerations. Thus, public use opportunities could exert more recreation pulling force than is usually expected at a national park where the recreation use is generally of a more passive or contemplative nature."

THE POINT REYES NATIONAL SEASHORE, AS APPROVED BY THE SENATE COMMITTEE would consist of 53,000 acres of which 26,000 acres would be a pastoral zone in which

the federal government would obtain easements, but which would remain private land so long as it is used for ranching or dairying. Forest land within the proposed seashore totals about 12,000 acres.

HOUSE SUBCOMMITTEE TO TOUR WESTERN STATES

to seek forestry information. Tentative schedule of the subcommittee of forestry of the House Committee on Agriculture includes a look into western and national forestry issues, October 1-10. First stop on October 1 is Spokane, Wash.; then Chelan on October 2; Seattle, October 3; Gray's Harbor, October 4. On October 6 and 7, the subcommittee will hold hearings in Portland, Ore., on the Forest Service-Park Service management of recreational areas. The tour will then continue in Newport, Ore., on October 8, the Oregon Dunes on October 9, and Waldo Lake, October 10. Chairman of the subcommittee is Representative George Grant of Alabama.



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fits of woodlands, such as recreation, water and wild life.

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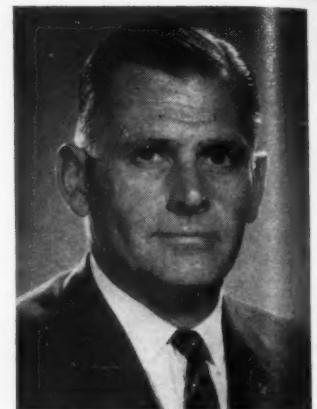
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Canadian Institute of
Forestry

Lowell Besley, Chairman, Woodlands Department, Pulp and Paper Research Institute of Canada and a former Executive Director of the American Forestry Association, has been elected president of the Canadian Institute of Forestry, national body of professional foresters, according to its recent announcement. George S. Allen, Dean of Forestry of the University of British Columbia was elected vice president.

Mr. Besley, a native of Maryland and a graduate in forestry of Cornell (BS 1931) and Yale (MF 1932) has been a research forester (Md. Dept., Duke Forest, NC and SE states, U. S. Forest Service, Pa. and W. Va. Experimental Stations), college professor in forest measurements, economics, and finance (Penn State 1934-7, W. Va. Univ. 1937-48, U.B.C. 1948-53), naval officer (Lt. Cdr., U. S. Naval Reserve Pacific 1942-6), forest management Consultant (B. C. 1949-52), association manager (Exec. Dir. Forester, The American Forestry Association 1953-6), forest operator (president, Besley & Rodgers, Inc. 1960-), and author of a textbook, bulletins, and numerous articles.

He came to Canada in 1948 as head of forestry at the University of British Columbia and became its first Dean of Forestry in 1950. He joined the Pulp and Paper Research Institute in his present position in 1956. Active in C.I.F. since 1949, he has served as a section chairman (Vancouver 1950), director (1951, 1959-61) and vice-president (1959-61). He participates in many other organizations including Woodlands Section CPPA, association of British Columbia Foresters, Forest Biology Committee of TAPPI, Empire Forestry Association, Society of American Foresters, Forest Products Research Society and advisory groups of the Laval Forest Research Foundation, Ontario Research Foundation, and 1961 Resources for Tomorrow Conference.

YOUR BALLOT

as a Member of The American Forestry Association for the Election of Directors

Dear Member:

Please vote, and return this ballot to The American Forestry Association, 919 17th Street, N.W., Washington 6, D.C., so that it will be received on or before the voting deadline, November 30, 1961. Please do not fail to register your vote. Do not sign. Anonymity is required.

Your Committee on Elections, consisting of S. G. Fontanna, Chairman, Harry Mosebrook and Edward Wootzley, has the honor of presenting the following slate of candidates for Directors of The American Forestry Association, to serve for the terms as indicated. The Committee believes this slate is worthy of your unqualified approval.

In accordance with the By-Laws, the President, Vice President, Treasurer, and the twenty-one Honorary Vice Presidents are elected annually by the Board of Directors.

BONFIELD, G. B., Grand Rapids, Michigan. Vice-President, Paperboard Division, Packaging Corporation of America. Present Director of the Association, having served as Regional Vice President for Central Region in 1959 and 1960.

FEIST, IRVING J., Newark, N.J. Member, Executive Board, National Council Boy Scouts of America; Chairman National Committee on Conservation, BSA; Chairman, Governor's Youth Committee, Izaak Walton League of America; consultant, New Jersey Resources Water Advisory Committee; 1961 AFA Honorary Vice President.

FREDERICK, KARL T., New York, N.Y. Chairman of the Board, New York State Conservation Council. Associated with such organizations as American Game Association, Camp Fire Club of America, National Rifle Association, National Wildlife Federation, and Association for the Protection of the Adirondacks. He has been an AFA Director since 1937 and at present is Chairman of the Board's Executive Committee.

GODDARD, MAURICE K., Harrisburg, Pennsylvania. Secretary, Pennsylvania Department of Forests and Waters. Has been active in all phases of Pennsylvania's resource problems, including forests, waters, parks and recreation, navigation, pollution, minerals, agriculture and urban renewal. Recipient of AFA's 1960 Distinguished Service Award. 1961 Honorary Vice President of AFA. Prior to his present position, he was Director of the School of Forestry at Pennsylvania State University.

MCKNIGHT, HENRY T., Minneapolis, Minnesota. General Chairman, Natural Resources Council of Minnesota. Owner and Manager of Cornwall Farms in Minnesota and Virginia. AFA Director since 1957 and member of the Board's Executive Committee.

MERREM, W. E., Houston, Texas. Consultant, East Texas Pulp and Paper Company. At present AFA Director and has in the past served frequently as one of Association's Honorary Vice Presidents.

NELSON, DEWITT, Sacramento, California. Mr. Nelson, active in forestry work for many years, is Director, State of California Department of Natural Resources. Has been an AFA Director since 1956; Vice-President, Society of American Foresters, 1954-1955, and SAF President 1956-1957. Member, Advisory Committee, Outdoor Recreation Resources Review Commission.

PARTAIN, LLOYD E., Philadelphia, Pennsylvania. Manager, Trade and Industry Relations, The Curtis Publishing Company. Present Association Director. Member, Advisory Committee, Outdoor Recreation Resources Review Commission. President, Pennsylvania Forestry Association.

PELLICER, X. L., St. Augustine, Florida. Vice President, The St. Augustine National Bank; pioneer and effective leader in development of forestry in Florida, as well as other parts of the South. He is currently serving as an Association Director.

ROSECRANS, W. S., Los Angeles, California. Agriculturist. Formerly Chairman, California State Board of Forestry. Present Association Director, having served as President eight years—1941 through 1948. Past Director, Chamber of Commerce of the United States of America.

WAGNER, CORYDON, Tacoma, Washington. Vice President, R. D. Merrill Company, Seattle; President, Western Forestry and Conservation Association, 1960-1961. Head, U.S. Delegation to Sessions of the Timber Committee of the United Nations Economic Commission for Europe at Geneva, Switzerland, 1958 and 1959; Vice Chairman, U.S. Delegation to the Fifth World Forestry Congress, Seattle, Washington, 1960.

Tear out and mail this Ballot, please, to:

COMMITTEE ON ELECTIONS

The American Forestry Association, 919 17th Street, N.W., Washington 6, D.C.

FOR DIRECTORS (For three-year terms—Seven to be elected)

January 1, 1962—December 31, 1964

<input type="checkbox"/> Irving J. Feist New Jersey	<input type="checkbox"/> Lloyd E. Partain Pennsylvania
<input type="checkbox"/> Karl T. Frederick New York	<input type="checkbox"/> X. L. Pellicer Florida
<input type="checkbox"/> Henry T. McKnight Minnesota	<input type="checkbox"/> Corydon Wagner Washington
<input type="checkbox"/> DeWitt Nelson California	<input type="checkbox"/>

FOR DIRECTORS (For two-year terms—Two to be elected)

January 1, 1962—December 31, 1963

<input type="checkbox"/> G. B. Bonfield Michigan	<input type="checkbox"/> W. E. Merrem Texas
<input type="checkbox"/>	<input type="checkbox"/>

FOR DIRECTORS (For one-year term—Two to be elected)

January 1, 1962—December 31, 1962

<input type="checkbox"/> Maurice K. Goddard Pennsylvania	<input type="checkbox"/> W. S. Rosecrans California
<input type="checkbox"/>	<input type="checkbox"/>

THE BOOK SHELF

Members of the Association are entitled to a discount of 10% from the price of books on forestry, and related subjects. We offer a partial listing and you may order others on the same subjects, whether listed or not.

AFA'S SELECTION FOR THE MONTH

DISCOVERY: Great Moments in the Lives of the World's Outstanding Naturalists, edited by John K. Terres. Lippincott. Price \$6.50.

TREES

American Trees, A Book of Discovery—Platt	\$ 3.50
Field Book of American Trees and Shrubs—Mathews	3.95
Fundamentals of Horticulture—Edmond, Musser, Andrews	7.50
Illustrated Guide to Trees and Shrubs—Graves	6.00
Natural History of Trees—Peattie	6.00
North American Trees—Preston	4.50
Standard Encyclopedia of Horticulture—Bailey, 3 Vols.	52.00
Tree Care—Haller	5.95
Trees for American Gardens—Wyman	8.00
Trees of the Western Pacific Region—Kraemer	5.50
1001 Questions Answered About Trees—Platt	6.00

GENERAL FORESTRY

Forests For The Future—Loehr	\$ 3.00
Forest History Sources of the United States and Canada—Neiderheiser	3.00
Forest Policy—Greely	6.50
Forest and Range Policy—Dana	7.95
Forest Valuation—Chapman & Meyer	8.50
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The Biltmore Story—Schenck	3.95

FOREST MANAGEMENT

American Forest Management—Davis	
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Forest Inventory—Spurr	
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Wild Flowers—How to Grow Them—Steffek	3.95

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1001 Questions Answered About Birds— Cruickshank	5.00

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Let's Go Camping—Zarchy	3.25
Outdoorsman's Cookbook—Carhart	2.95

BOOKS OF GENERAL INTEREST

America's Natural Resources—Callison	\$ 4.00
American Resources—Whitaker & Ackerman	7.50
Bears in My Kitchen—Merrill	3.95
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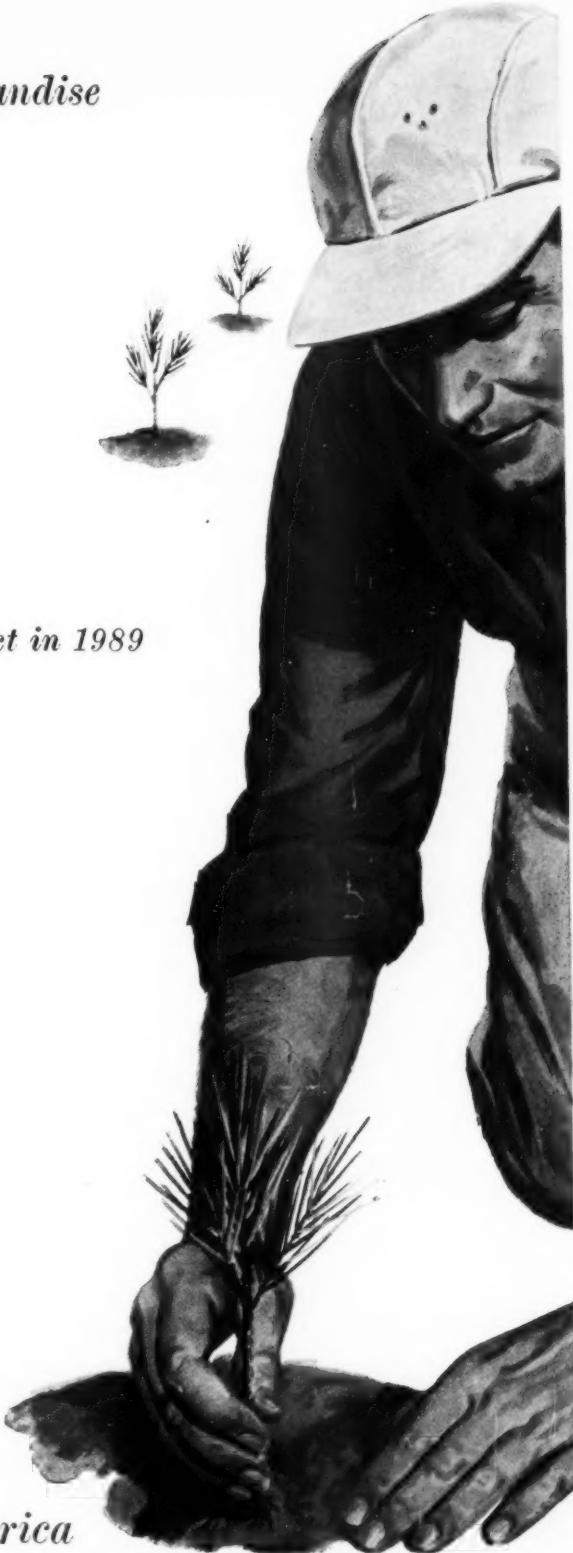
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CONTROL THEM ALL WITH
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INDIAN

FIRE PUMPS

THE WORLD'S BEST!



For over 30 years INDIAN FIRE PUMPS have put out small fires before they grow into big ones. Pumps on new models have been shortened to 18 inches. Telescope handle, however, extends pump as long as before. Shortened pump will not snag on brush and is more compact for nesting in trucks and storage. Brass tank models are highly popular. Will not rust or corrode.

No. 90 INDIAN FIRE PUMP

(Sliding Pump Type)



All models of INDIAN FIRE PUMPS are approved by Factory Mutual.

Send for circular on our new
No. 90 FIBERGLASS
tank model. Light weight,
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New, shorter brass pump.

No. 90 sliding pump type shown above. Available in
Armco zinc grip steel, solid brass or chrome tanks.

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Continuous high pressure. Pump throws strong stream or nozzle adjusts for spray or fog mist. Sturdily built to give many years of service.

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